

Henry Spradblatt

FORMULATION OF AN ACTUARIAL COST MODEL FOR FEDERAL LONG-TERM CARE PROGRAMS

Final Report

Submitted to the
Health Care Financing Administration
Contract No. 500-79-0053

September 30, 1981

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ICF INCORPORATED 1850 K Street, Northwest,
Suite 950, Washington, D. C. 20006

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CHAPTER I

INTRODUCTION

A. NEED FOR THE MODEL

This document is the final report of a two year study to develop an actuarial cost model for federal long-term care programs. The study was conducted for the Health Care Financing Administration (HCFA) to develop an analytical tool and the associated data which could be used by HCFA and other parts of DHHS for planning and policy analysis purposes. A second purpose of the study was to illustrate the use of the model by analyzing the impact of several possible program changes on LTC program use and costs. The need for such a tool has been growing as federal expenditures for long-term care have increased significantly.

Currently, expenditures for long-term care (LTC) services are growing faster than expenditures for any other health services. Between 1970 and 1981, nursing home expenditures, which account for a major portion of long-term care expenses, increased over five-fold from \$4.7 billion to \$24.5 billion. HCFA projects that this amount will grow to \$44.6 billion by 1985 and to \$81.9 billion in 1990.^{1J} This growth is likely to accelerate even faster after the turn of the century as persons born during the post-war baby boom pass the age of 65. Between 1981 and the year 2030, the U.S. population over age 65 is expected to more than double. The population over age 75, the primary group requiring long-term care services, will increase more than 165

^{1J} Mark S. Freeland and Carol E. Schendler, "National Health Expenditures: Short-Term Outlook and Long-Term Projections", Health Care Financing Review, Winter 1981, pp. 105-107.

percent.^{2]} The potential impact of this demographic change is very significant. Another ICF Incorporated study found that if real per capita expenditures remain constant between 1981 and 2030, then Medicare expenditures for nursing home and home health care would increase 2.5 times in real terms^{3]}

The portion of expenditures for long-term care paid by public programs also has been increasing. In 1970, public programs paid for 42 percent of national nursing home expenditures. This percentage is projected to increase to 57 percent in 1981.^{4]} Most of these public expenditures were made by HCFA programs--Medicaid and Medicare. In calendar year 1979, Medicaid programs spent \$8.8 billion^{5]} and Medicare spent \$0.4 billion for nursing home care. Combined, these amounts equalled 91 percent of public expenditures for nursing home care in that year. Other major public expenditures in that year include about \$790 million for home health care under Medicare and Medicaid.^{6]} Clearly, the size and rate of growth of these expenses are creating pressures for the federal and state governments to modify these programs to make them more cost-effective. In addition, well-documented

^{2]} U.S. Department of Health and Human Services, "Long Term Care: Background and Future Directions", Health Care Financing Administration, January 1981, p. 10.

^{3]} Unpublished ICF Incorporated estimates using the ICF Macroeconomic-Demographic Model.

^{4]} Freeland and Schendler, op. cit., pp. 105-107.

^{5]} U.S. Department of Health and Human Services, op. cit., p. 15.

^{6]} ICF estimates using unpublished HCFA data, and estimates from the Long Term Care Model.

problems of inappropriate use of long-term care services and poor quality care are generating interest in program reform.

Projecting the future growth of federal long-term care program costs and the implications of changing federal programs on the cost and use of long-term care services requires the development of a model that will take into account the major factors affecting LTC program use and expenditures. Single projections based upon extrapolation of past usage and expenditures cannot be made due to the rapidly changing age profile of the U.S. population. Straightforward applications of historical age-and-sex specific use rates also cannot be used. Since the supply of long-term care services to persons paying for care through public programs is not growing with demand. Hence, federal LTC program projections must take into account the effect of the supply of LTC services on program use and expenditures. Finally, because the largest federal program for LTC services, Medicaid, varies by state, the special characteristics of each state program must be taken into account to accurately project LTC growth or evaluate the potential impact of policy changes. For example, if a change were made in the Medicaid program which affects only states with Medically Needy coverage of long-term care services, then state-specific analyses would have to be conducted.

B. MODEL SCOPE

The Long-Term Care Model described in this report was developed to meet the planning and policy needs described above. The Model focuses primarily upon Medicare and Medicaid, which are HCFA programs. In addition, it includes a less detailed analysis of long-term care services under the Title XX program, which is the other major LTC program funded through the Department of Health and Human Services.

The only other major federal programs that cover long-term care are the Veterans Administration programs, which accounted for about 18 percent of federal LTC expenditures in fiscal year 1976. We do not include analysis of the VA programs in this model, because it does not seem likely that they will be integrated into HCFA programs. However, we estimate the number of persons receiving VA long-term care benefits so that they are not considered as recipients of civilian LTC benefits as well.

The Long-Term Care Model develops state and national projections for the Medicare, Medicaid, and Title XX programs for the years 1977 through 1990. Projections are made of program expenditures (broken down into state and federal shares in the case of Medicaid), utilization, and recipients by the type of long-term care (LTC) services utilized.

Services we model explicitly are the following:

- skilled nursing facility (SNF) care -- nursing, rehabilitation and supervision provided to residents on a 24-hour basis in nursing homes certified as SNFs by Medicaid or Medicare.
- intermediate care facility (ICF) care -- nursing and other health related services provided to inpatients who do not require the degree of care provided by hospitals or SNFs; excluded from this category are services that are not primarily designed to provide medical or nursing care.
- home health care -- services furnished a patient at his home, including:
 - intermittent or part-time nursing service provided by a home health agency or by a registered professional nurse or licensed practical nurse;
 - medical supplies, equipment and appliances for use in the home;
 - services of a home health aide.
- intermediate care facilities for the mentally retarded (ICF/MR) services -- health or rehabilitative services provided by facilities especially to assist the mentally retarded.

- personal care home services -- services whose primary purpose is to provide care and supervision in a supportive environment to residents who are elderly and/or have a special problem or condition; domiciliary homes are included in this category.
- homemaker services -- general housework and chore services, including cleaning, laundry, meal preparation, and shopping for impaired individuals living at home. Medical services are excluded.

These classifications are based upon Title XVIII and Title XIX service categories and classifications suggested by the Technical Consultant Panel on the LTC Minimum Data Set in its July 1979 Final Report. The first four types of services are currently covered by Medicaid or Medicare. The bulk of Title XX program LTC expenditures are for homemaker services.

We also estimate use of acute care hospitals by persons who are unable to be placed in the long-term care settings studies because of inadequate supply of LTC services in these settings. These estimates help to assess the program costs generated by inadequate LTC capacity in nursing homes and other settings.

The services defined above account for most long-term care services that are likely to be covered by federal programs during the 1990 time horizon. They do not include psychiatric services because most public expenditures for psychiatric care are borne by the states. They are not likely to be a significant part of any federal LTC initiatives in the near future, because their costs would be prohibitive. The model is designed so that psychiatric and other services can be added in future modifications of the model.

C. USE OF THE MODEL

This model was designed to be a policy analysis tool for analyzing a broad range of issues including:

- estimating the need for long-term care services;
- assessing the extent of inappropriate use of long-term care services under Medicare and Medicaid;
- forecasting future federal and state expenditures for long-term care services under Medicare and Medicaid;
- analyzing the impacts of changes in Medicare or Medicaid eligibility criteria; and
- analyzing the impacts of changing the services covered by Medicare or Medicaid.

The LTC Model is well-suited for these applications because it is the only model that integrates state-by-state demographic projections, state and federal LTC program characteristics, and provider characteristics into a single logical framework. Unique features of the model are that it explicitly takes into account the following factors:

- projected changes in the age and sex composition of the populations in each state;
- the income distributions of persons needing long-term care and the income tests for categorically Needy and Medically Needy eligibility in each state;
- supply constraints that limit the number of persons able to receive LTC services under Medicare and Medicaid; and
- patterns of inappropriate placement of persons needing long-term care when there is inadequate supply of needed services.

These factors are all key determinants of LTC expenditures, recipients, and utilization under the federal and state LTC programs studied here.

D. ORGANIZATION OF THE REPORT

The remainder of this report includes three additional chapters and five appendices. Chapter II presents a description of each of the Long-Term Care Model, explaining how it operates and justifying the assumptions and parameters used. Chapter III presents the findings and projections made using

the Long-Term Care Model. It includes "base case" projections through 1990 and two projections reflecting policy changes in Medicaid coverage and Medicare reimbursement. Chapter III also presents additional findings that resulted from the development of LTC Model estimates. Chapter IV of this report identifies additional applications of the LTC Model. It also discusses model limitations and areas in which new data or additional research can be used to refine the Model.

Finally, this report has five appendices, which explain in further detail the analyses that were undertaken to develop Model assumptions and estimates and present base case projections. Appendix A presents a detailed explanation of the development of the need rates that are used in the Long-Term Care Model which supplements the description of the methodology presented in Chapter III and presents the scoring system that was used to assess LTC need. Appendix B reviews the methods used to evaluate whether the supply of LTC services to persons covered by Medicaid and Medicare is adequate to meet demand under these programs. Appendix C presents our findings about Medicare and Medicaid LTC placement practices. This information was used to assess the patterns of inappropriate placement when the supply of long-term care services is not sufficient to meet demand. Appendix D presents a summary of our attempt to develop econometric equations to forecast supply of LTC services to the Medicare and Medicaid programs. This appendix explains why it was not possible to develop such equations because of inadequate data. Finally, Appendix E presents the LTC Model's national estimates of Medicare, Medicaid, and Title XX program LTC utilization, recipients, and expenditures for the years 1977 through 1990. In addition, state estimates for the years 1977, 1980, 1985, and 1990 are provided.

Accompanying this Final Report are a separate Executive Summary and a User's Guide to the Long-Term Care Model. The Executive Summary highlights the general design of the LTC Model, its base case projections, and discusses the potential impact of the illustrative cost-cutting policies analyzed in this report. The User's Guide describes the computer programs, data inputs, and program outputs of the Model. It also explains how to run the Model on the Social Security Administration UNIVAC 1108 computer.

E. ACKNOWLEDGEMENTS

Development of the Long-Term Care Model was a difficult effort, with many problems encountered in collecting data and utilizing the Social Security Administration's UNIVAC 1108 computer system. Invaluable assistance and support was provided to us in our work by our four HCFA Project Officers-- Robert Flint, Tony Dousett, Richard Bayles, and George Calat. Messrs. Dousett, Bayles, and Calat provided valuable actuarial input and review of the model during all stages of its development. In addition, Donald McKinnon, Denis George, and Michel St-Germain of William M. Mercer, Inc. provided helpful actuarial input during the initial design stage of the LTC Model. Mary Simon and Betty Cornelius of HCFA provided useful technical contributions and helped to review a draft of this report. Mark Freeland, Helen Lazenby, Charlie Fisher, and Richard Beisel provided data that was used in the Model. Finally, Rose Connerton, William Everhart, Marilyn Newton, and Winston Edwards helped us to deal with the constraints imposed upon us by the UNIVAC 1108 system. The assistance of these people facilitated our use of the Social Security UNIVAC computer.

CHAPTER II

THE LONG-TERM CARE MODEL

In this chapter we describe the components of Long-Term Care Model in greater detail. Section A presents the design criteria that were established to guide the development of the Model. Section B presents an overview of the resulting Model structure. Sections C through H describe the modules of the model used to project Medicare and Medicaid program costs and use. For each module we describe the methodology used, data sources, and intermediate outputs of the modules. Finally, Section I describes the formulation and data used to estimate Title XX program costs and use. Title XX forecasts are developed independently of the forecasts for Medicare and Medicaid.

A. MODEL DESIGN CRITERIA

In order to meet HCFA's needs for reliable forecasts covering a wide range of federal long-term care policy options, we designed the long-term care forecasting model to achieve the following objectives:

- explicitly incorporate demographic and economic trends -- In order to capture the basic trends in long-term care utilization and expenditures, it was essential to relate them to changes in the age composition of the U.S. over time. The LTC model incorporates age and income distribution data on those needing long-term care so that it is possible to project how the number of people covered by federal long-term care programs will change over time.
- model each state separately -- Because there are substantial differences in Medicaid programs across states, it was essential to model each state separately in order to obtain accurate long-term care projections.
- explicitly estimate the need for long-term care services -- The actuarial model includes estimates of need for long-term care services in order to capture the potential impact of changes in the services covered by federal programs. For example, many

Medicaid recipients currently need homemaker services plus occasional home health visits. However, under current regulations, Medicaid does not cover homemaker services, and so many are placed in an ICF instead. If Medicaid were to cover non-health as well as health services in the home, there could be a significant decrease in ICF utilization and an increase in homebased care. The potential impact of such changes can only be measured by estimating the need for specific services in specific settings.

- explicitly relate the effective demand for services to government eligibility requirements and coverage of services -- As the above example illustrates, the effective demand for specific long-term care services (i.e., services that are actually sought by individuals) is influenced not only by need but also by the coverage available from government programs if individuals are eligible for government benefits. Therefore, an analysis of the effective demand should be able to incorporate the effect of changes in government coverage and eligibility requirements.
- explicitly model the interrelationship between demand and supply for long-term care services -- One reason for the placement of individuals in inappropriate long-term care settings is that there frequently may be an inadequate supply of services in an appropriate setting; for example Medicaid patients frequently are placed in relatively more expensive SNFs rather than ICFs, when no ICF beds are available. This interrelationship between supply and demand is incorporated into the LTC forecasting model in order to accurately determine future utilization patterns.
- be designed so that the impact of key HCFA policy changes can be forecast -- The LTC model has the capability to analyze the impact of changes in Medicare and Medicaid provisions such as eligibility for long-term care services and services covered.
- use readily available data and forecasts where possible -- In order to make it easier for HCFA staff to utilize the long-term care actuarial model, it is desirable to minimize the amount of input data collection needed after the model is developed. To achieve this objective, the model relies upon readily available demographic forecasts and upon data collected by HCFA, the National Center for Health Statistics, the Social Security Administration, and other DHHS organizations.

Because of data limitations on Title XX LTC services, it is not possible to estimate demand and supply of these services. States are not required to report any utilization data, and there is no data on the amount of services

that these providers are capable of producing. Therefore, we have to estimate Title XX expenditures in a simpler fashion. However, in the case of the two major federal LTC programs, Medicaid and Medicare, we used the above objectives to design the model.

B. GENERAL MODEL STRUCTURE

The Long-Term Care Model forecasts Medicare and Medicaid program trends separately from Title XX program trends. More emphasis is placed upon the former two programs, because they account for about 93 percent of the total federal LTC expenditures for the three programs studied here.

1. Medicare and Medicaid

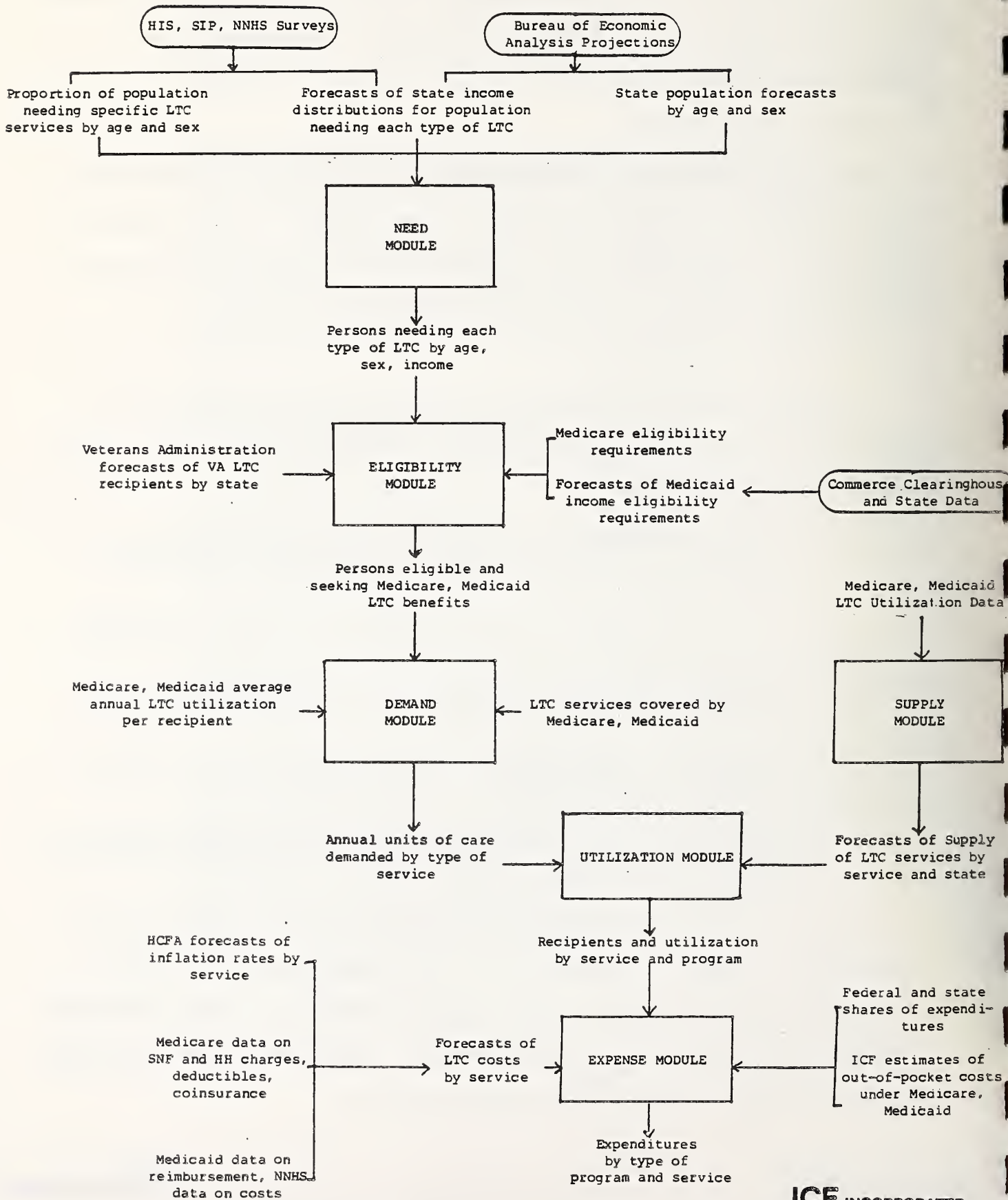
Forecasting Medicare and Medicaid LTC expenditures and utilization is accomplished through the use of six computer program modules. These modules perform the following steps:

- estimate the need for LTC services based upon functional disability, health status, and the availability of informal social support (Need Module);
- screen for program eligibility based upon services needed age, income (Eligibility Module);
- estimate the quantity of LTC services eligible persons would demand (Demand Module);
- estimate the supply of LTC services for Medicare and Medicaid patients (Supply Module);
- estimate utilization, taking into account imbalances between supply and demand and possible inappropriate placement that might result (Utilization Module);
- calculate correspondence program expenditures (Expense Module).

These steps are applied to each state to produce state estimates. State estimates are added together to obtain national estimates. Figure II-1 shows the basic interaction between the six modules. The basic concepts underlying the steps are quite simple and are explained below.

FIGURE II-1

FLOWCHART OF LTC MODEL CALCULATIONS
USED FOR MEDICAID, MEDICARE PROGRAMS
(To be Applied to Individual States)



The first step in producing Medicare and Medicaid projections is to estimate the underlying need for LTC services in the population of each state. This is done by analyzing the impairment and social support characteristics of persons in different age and sex groups in the U.S. The 1977 Health Interview Survey, the National Nursing Home Survey, and the Survey of Institutionalized Persons were the sources of these data. They were analyzed using a modification of the Geriatric Functional Rating Scale (GFRS) to assess the proportion of persons in different age-and-sex cohorts needing different long-term care services. Although the modified GFRS as used in the model is not totally appropriate for assessing the needs of specific individuals, it is a relatively good tool for assessing the LTC needs of the general population. The resulting "need rates" for different age-and-sex cohorts were applied to state population projections by age and sex to estimate the underlying need for LTC services in each state through 1990.

Using data from the three social surveys noted above, we also tabulated several characteristics of persons in each age-and-sex cohort that would be relevant for determining Medicare and Medicaid eligibility. These characteristics included age, presence of a prior hospital stay, and income distributions by family size. These were used to screen individuals for eligibility for LTC benefits. Further screens for other eligibility requirements were made implicitly through calibration factors designed to make model estimates consistent with historical data on Medicare and Medicaid LTC recipients.

After the number of eligible persons is determined, then estimates of the corresponding demand for LTC services are calculated. In these calculations,

we assume that persons eligible for both Medicare and Medicaid benefits will demand Medicare benefits first. In addition, we estimate the number of persons who will elect to receive Veteran's Administration LTC benefits instead, based upon VA projections. In the case of most services, demand estimates are made in terms of the quantity of services that eligible persons will seek. In the case of Medicaid ICF/MR and home health care, demand is measured in terms of the number of persons seeking care, because data on utilization are not available.

Demand for LTC services is compared against the supply of services to Medicare and Medicaid patients in order to determine the quantity of services (or in the case of Medicaid ICF/MR and home health, the number of persons) that can be provided. Unlike conventional markets, markets for Medicare and Medicaid LTC services do not necessarily reach an equilibrium, because prices are set by regulatory mechanisms rather than allowed to vary until demand and supply are equal. ICF Incorporated conducted extensive analyses to try to develop econometric equations for estimating supply. However, it was not possible to develop suitable equations because of inadequate cost and revenue data on LTC providers. Instead, supply estimates were developed based upon a review of past trends in LTC supply.

Utilization of LTC services is determined by the interaction of demand and supply. Where demand exceeds supply, we estimate that utilization is equal to the quantity of services available. This determines the number of recipients. Where demand is less than supply, the Model estimates utilization to be the amount of service demanded and the number of persons seeking that service. Analysis of LTC placement patterns in the Medicare and Medicaid

programs indicated that, in cases of excess demand, some persons were provided with higher levels of long-term care services if those services were available. Based upon our research, we developed an algorithm to estimate the extent of inappropriate placement that occurs as a result of inadequate supply in each state.

Finally, the LTC Model estimates the program expenditures for the services utilized by multiplying utilization by the average unit costs of care. Separate federal and state shares of Medicare expenditures are calculated using Bureau of Economic Analysis projections of per capita income in each state and the current formula for determining the percentage paid by the federal government.

2. Title XX

Title XX projections are made much more simply, because it is a much smaller program, and very little data is available on the program. Our basic approach for Title XX forecasting was to estimate historical expenditures and recipients of LTC services under the program and to extrapolate them into the future. Title XX LTC expenditures were primarily for homemaker and chore services to Supplemental Security Income (SSI) recipients. Estimates of the corresponding expenditures and recipients were made for 1976 through 1979. Historical growth rates over this period were then applied to all states. In six states, this procedure did not yield results that seemed reasonable. In these cases, we contacted State Title XX agencies to develop different forecasting assumptions.

The remainder of this chapter describes the LTC Model in more detail, explaining the assumptions and the operation of each module in more detail.

C. THE NEED MODULE

1. Data Requirements

The Need Module estimates the number of people needing six types of care:

- skilled nursing care
- intermediate care
- intermediate care for the mentally retarded
- personal care services
- home health services, and
- homemaker services.

This is done by applying the following equation:

$$N_{ij}(t) = M_i(t)r_{ij} \quad ,$$

where:

- $N_{ij}(t)$ = number of persons in the i th age-and-sex cohort, needing the j th LTC service in year t ;
- $M_i(t)$ = population in the i th age-and-sex cohort in year t ; and
- and r_{ij} = the need rate of the i th age-and-sex cohort for the j th long term care service.

Therefore two types of data are necessary to generate the number of people in each age and sex cohort who need those services mentioned above. These data are population and need rates.

Projections of population by age and sex are provided by the Bureau of Economic Analysis. BEA projections project the total number of people over 65, but do not provide a breakdown of the over 65 group. Therefore, this information was supplemented by phone calls to states to get projected breakdowns of the elderly by the age groups used in the model.

Need rates for the general population were not available from other sources. Therefore, ICF estimated need rates using the following surveys:

- The 1977 Health Interview Survey (HIS) - The 1977 HIS and the 1977 supplemental disability survey were chosen for use in the determination of need rates for the non-institutional population.

The HIS is a general health survey conducted annually on a large sample of persons nationally. It provides data on mobility limitations, personal care, and work limitations. The disability survey provides information on activities of daily living, need for assistance, and chronic limitations.

- The 1976-1977 National Nursing Home Survey (NNHS) - The NNHS was chosen to provide data on the needs of the nursing home population. The NNHS provides information on chronic impairments, independent living limitations, and need for assistance.
- The 1976 Survey of Institutionalized Persons (SIP) - This survey provides an income profile of all institutionalized persons, and provides information on the long-term care needs of the institutionalized population. For the Long-Term Care Model, it is used to provide information on the population other than those in nursing homes. This includes individuals in facilities for the physically handicapped, children's facilities, hospitals for the chronically ill, and psychiatric facilities.

Using these surveys, needs estimates were developed for the civilian institutional and non-institutional population. These data sources were chosen for use because they provide the most recent, comprehensive data on chronic limitations. No one survey alone provided sufficient information. It was therefore necessary to combine these three surveys in order to generate needs estimates applicable to the general population.

The process for developing needs estimates using these surveys is described in the next section.

2. Development of Needs Estimates

Estimates of need for six long-term care services are necessary for the ICF long-term care model. In choosing the methods to be used to generate these estimates, several criteria were considered:

- appropriate versus inappropriate placement - The methodology chosen had to reflect appropriate placement patterns and provide estimates of actual need for long-term care. Because such information is unavailable, the methodology described below was developed.

- data availability - The methods of generating needs estimates had to be based upon the data available in the three surveys chosen for use in the model.
- objective placement criteria - Needs estimates must be made using objective criteria, such as questionnaires, rather than physician, nurse or social worker judgements.

We, therefore, considered all available patient assessment questionnaires designed to assess the long-term care needs of the patient. Those considered included systems developed by Sherwood, Morris, and Barnhardt,¹ New York State,² Grauer and Birnbom,³ and Parker and Boyd.⁴ These patient classification systems are described in detail in Appendix A.

The Geriatric Functional Rating Scale (GFRS) developed by Grauer and Birnbom was chosen for use to develop need estimates. The GFRS assesses individuals using a questionnaire to determine their need for three types of long-term care:

- institutional care
- supportive care in a protective setting, and
- continued community residence.

The GFRS was developed by practitioners in Montreal and tested on three groups of individuals, the first from the community, the second from a day-care

¹ Sylvia Sherwood, John Morris, Ester Barnhart, "Developing a System for Assigning Individuals into an Appropriate Residential Setting", Journal of Gerontology, 1975, Volume 30, No. 3, pp. 331-342.

² New York State Office of Health Systems Management, "Development of Numerical Standards for Patient Placement in New York State Long-Term Care Facilities", prepared by Martin Orr, April 18, 1975.

³ H. Grauer and F. Birnbom, "A Geriatric Functional Rating Scale to Determine the Need for Institutional Care", Journal of the American Geriatrics Society, 1975, Volume XXIII, No. 10, pp. 472-476.

⁴ Roger Parker and Jeff Boyd, "A Comparison of Discriminant Versus a Clustering Analysis of a Patient Classification for Chronic Disease Care, Medical Care, 1974, Volume XII, No. 11.

facility, and the third from a long-term care institution. These groups of people had been originally placed by a team and were then assessed using the GFRS, with a high degree of success, especially for the institutional group and the group to remain in the community. The GFRS was further tested by Noelker and Beckman at the Benjamin Rose Institute in Cleveland, Ohio.⁵

Patient placement was evaluated simultaneously by a team of social workers and by the GFRS. The success rate, measured in terms of the instrument's ability to predict placement level, was lower in Cleveland than in the original study, but was still proven to be a useful tool for patient placement. It is the only known tool which distinguishes between the need for institutional and non-institutional care. The GFRS places individuals according to scores based on answers to questions about physical health, functional capacity, mental status, community resources, finance and living situation. However, Noelker and Beckman found that the effect of physical health, functional capacity and mental status are the most important variables to be considered. Nonetheless, information on community resources and living situation are also included on the form. The GFRS is thought to be highly predictive for institutional groups and for the group that should remain in the community. It is also believed that the GFRS will be more effective for predicting placement patterns of a large population, as opposed to placement location of an individual.

⁵ Linda S. Noelker and Alan Beckman, "The Decision to Institutionalize: A Comparison of Social Work Clinical Judgement and the Geriatric Functional Rating Scale", paper presented at the Annual Meeting of the APHA, New York, November 1979.

The GFRS was chosen for use in the model because:

- The GFRS is the only objective tool which distinguishes between those in need of institutional care, and those in need of non-institutional care.
- The GFRS can be modified to include variables for which we have data. These modifications can be made while maintaining the basic structure and content of the questionnaire.
- The GFRS provides objective rules which can be used within the structure of a computer model.

Because of data limitations, the GFRS had to be slightly modified. The major change made was the substitution of the Index of Activities of Daily Living for the Instrumental Activities of Daily Living at the appropriate levels. In addition, changes were made in the mental status section of the questionnaire. Because of data limitations, the medical diagnosis was substituted as a measure of need. These changes and the resulting Modified Geriatric Rating Scale (MGRS) are presented in Appendix A.

The MGRS divides the population into three levels of care. Those determined to need institutional care were further divided into groups needing skilled nursing facility (SNF) care and intermediate care facility (ICF) care. This was done using the six Activities of Daily Living (ADL) developed by Katz.⁶ These six activities are:

- bathing
- dressing
- toileting
- transferring
- continence
- feeding.

As noted in studies by Katz, people needing assistance with eating or who are incontinent, need a more intensive, continuous kind of care than those needing

⁶ Sidney Katz, "Studies of Illness in the Aged", Journal of the American Medical Association, 1963.

help with the first four. Katz also notes that the continence function is a major determinant of level of care, recovery, and continued assistance. Two other studies noted the importance of functional ability in placement. A study by Allison-Cooke and Thornberry found that 77 percent of the people appropriately placed in SNFs were dependent in four or five functions and 86 percent were dependent in six functions.⁷ In a study by Denson, McNitt and Jones 85 percent of people placed in SNFs were dependent in four or more functions.⁸

Based on these studies, the break between SNF and ICF patients was made on the basis of functional dependence. People who were determined to need institutional care on the basis of the MGRS and who were dependent in more than four functions were determined to need SNF care. Others were placed at the ICF level. It should be stressed that functional dependence was used to estimate the average need characteristics of large populations. This criterion for need would not be suitable for placement of individuals.

Need for ICF/MR care was determined using the MGRS along with an indication of mental retardation. An individual who needed institutional care, and who was mentally retarded was determined to need ICF/MR services. Not every mentally retarded person needs institutional care and use of the MGRS in addition to the criteria that the person is mentally retarded insures

⁷ Sherry Allison-Cooke and Helen Thornberry, "Factors Affecting Nursing Home Medical Review. Implications for Program and Facility Planning", Medical Care, June 1977, pp. 494-504.

⁸ Paul Denson, Ellen Jones and Barbara McNitt. An Approach to the Assessment of Long-Term Care, prepared for DHHS, NCHSR NTIS #PB-271389.

that individuals are placed in ICF/MR's only if they cannot function independently. Those who could function independently were determined to need services in the community.

Those who were determined to need services in the community were divided into three need categories:

- home health,
- homemaker, and
- no long term care services.

Need for these services was determined using types of care needed by individuals. If someone needed the services of trained medical personnel, they were determined to need home health services. Examples of these types of medical services are presented in Table II-1. People needing some assistance with ADL, but not needing medical services, were determined to need homemaker services. Those showing no physical impairment on the MGRS, or who needed assistance in the ADLs which could be provided by a spouse or other family member, were determined to have no need for long term care.

Each individual on the three surveys was screened as described above and placed into need categories. Preliminary need rates were then developed by applying the individual weighting factor used by the survey.⁹ Because the screening technique involved many questions, the need rates had to be further adjusted for non-response to questions necessary for placement. Finally, because the SIP was administered in 1976, the rates derived using this survey were applied to the 1977 institutional population. The resulting need rates

⁹ The adjustment factor is the reciprocal of the probability of selection. The adjustment factors are found on the individual's record on each tape. Weighting is necessary to extrapolate from a sample to the universe.

TABLE II-1

MEDICAL SERVICES USED TO DETERMINE NEED FOR HOME HEALTH CARE

1. Need for services provided by:

- physician
- registered nurse
- LPN or vocational nurse
- nurses aide
- intern or medical resident
- occupational therapist
- physical therapist
- speech therapist or audiologist

2. Need for services such as:

- change of sterile bandage
- oxygen therapy
- intravenous feeding
- injections
- physical therapy
- occupational therapy
- speech or hearing therapy
- other therapy services

are shown in Table II-2. It is important to note that these rates are based upon social survey data and provide population characteristics at only one point in time. Rates developed in the Need Module are adjusted to reflect the number of people needing long-term care at any time during a year.

3. Income Distributions

Estimates of income by state and by need group are necessary in order to estimate Medicaid eligibility in the Eligibility Module. Information on income was recorded from the HIS and SIP (the NNHS does not include questions on patient's income). Income distributions were then estimated for each age, sex, and need group using survey information. This was done in several steps.

First, income distributions generated using survey data were compared with income distributions available from the Survey of Income and Education (SIE) and from 1970 Census data. Income distributions generated here compared favorably with data available elsewhere. However, there was a high non-response rate for the income question on the Survey of Institutionalized Persons. It was assumed for this population that all individuals with no response to income questions had an income in the lowest bracket.

After income distributions were validated they were weighted up and adjusted for non-response just as was done to generate the need estimates. Then, distributions from the Health Interview Survey and Survey of Institutionalized Persons were combined.

Last, the income distributions were fit to a log-normal distribution, the function generally used to express distributions of income. Log-normal income distribution parameters were generated by age, sex, and need. Table II-3 summarizes the log normal parameters that were computed by age and sex categories.

TABLE II-2

NEED RATES USED IN THE LONG-TERM CARE MODEL^{a/}Percent of Females Needing LTC

	<u>Age</u>					
	<u>0-20</u>	<u>21-54</u>	<u>55-64</u>	<u>65-74</u>	<u>75-84</u>	<u>85+</u>
SNF	.036	.062	.201	.786	2.040	16.07
ICF	.006	.041	.136	.762	1.128	6.320
ICF/MR	.085	.093	.114	.001	.200	.620
Personal Care	.101	.228	1.040	1.849	5.290	14.120
Home Health	.273	.965	1.325	1.510	2.110	2.810
Homemaker	.006	.033	.600	1.420	3.930	8.030

Percent of Males Needing LTC

	<u>Age</u>					
	<u>0-20</u>	<u>21-54</u>	<u>55-64</u>	<u>65-74</u>	<u>75-84</u>	<u>85+</u>
SNF	.050	.048	.175	.806	2.062	8.243
ICF	.010	.020	.175	.437	1.189	3.829
ICF/MR	.110	.107	.061	.052	.093	1.397
Personal Care	.090	.192	.713	1.081	3.975	12.017
Home Health	.340	.917	1.549	1.629	1.908	3.627
Homemaker	.003	.030	.158	.371	1.225	3.652

^{a/} These rates represent the proportion of persons needing LTC services at a single point in time.

TABLE II-3

LOG NORMAL PARAMETERS OF INCOME
DISTRIBUTIONS BY AGE AND SEX

	<u>Age</u>						
	<u>0-20</u>	<u>21-54</u>	<u>55-64</u>	<u>65-74</u>	<u>75-84</u>	<u>85+</u>	<u>Total</u>
<u>Male</u>							
Log Mean	9.457	9.594	9.500	9.030	8.781	8.566	9.475
Log Variance	0.678	0.533	0.648	0.568	0.544	0.935	0.637
<u>Female</u>							
Log Mean	9.426	9.511	9.241	8.775	8.560	8.289	9.357
Log Variance	0.709	0.600	0.746	0.680	0.693	1.166	0.739
<u>Total</u>							
Log Mean	9.442	9.551	9.364	8.886	8.645	8.375	9.415
Log Variance	0.693	0.569	0.716	0.647	0.647	1.111	0.686

The income distributions obtained for individuals needing long-term care, by age and sex, were adjusted to reflect differences in income distributions across states. These adjustments were made using Bureau of Economic Analysis projections of average per capita income in each state through 1990. For each state and each year, the mean income values derived using the method described above were modified, by multiplying them by the ratio of state per capita income to national per capita income, as forecast by BEA. The standard deviations of the income distributions were also adjusted by the same factor, so that the general shape of the income distributions would remain the same.

4. Other Output of Need Module

The outputs of the need module are need rates by age and sex and income distributions for each age, sex and need cohort. In addition to this, the presence of several other characteristics necessary to estimate eligibility was estimated using survey data. These included:

- percent of each age, sex, and need cohort who were in single person families, and
- percent of each age, sex, and need cohort who had a prior hospital stay.

The information produced by the Need Module is used to determine eligibility for long term care programs in the eligibility module of the Long-Term Care Model.

D. ELIGIBILITY MODULE

The Eligibility Module estimates the number of people who are eligible for and seek Medicaid and Medicare LTC services, by state, for each year of the Model. This section describes how the model estimates eligibility for Medicare, the Medicaid categorically needy program, and the Medicaid medically needy programs.

1. Medicare

The number of people eligible for and seeking Medicare LTC services is determined in the LTC Model by putting individuals through a series of screens which correspond to the major eligibility requirements and other factors affecting individuals' decisions to seek care under Medicare when they are eligible. These screens are:

- age - Individuals over 65, who qualify for eligibility because of age will be distinguished from those under 65, who may qualify because of disability.
- services - Medicare covers only SNF and home health services, so only individuals needing these services will be considered for eligibility.
- prior hospital stay - Individuals are screened for a prior hospital stay as a requirement for eligibility for SNF care under the Medicare program. Until fiscal year 1982, this requirement must also be applied to Medicare home health services.

- demand adjustment rate - Demand adjustment rates are used to calibrate the model. Eligibility Module estimates recipients so that they are consistent with historical data on the number of persons actually receiving Medicare LTC services in 1977. These rates implicitly reflect the following factors:
 - eligibility requirements for Disability Insurance benefits for persons needing LTC services who are under age 65;
 - individuals eligible to receive LTC services under Medicare might not elect to receive these Medicare benefits because they are not aware they are eligible or they don't wish to receive care through Medicare.

In the Model, separate Medicare demand adjustment rates were developed for SNF and home health services. These rates were developed using initial 1977 model estimates based upon the first three screens only and program data for 1977. The demand adjustment rates were set to the ratio of the number of recipients to the number of persons eligible, based upon the first three screens. The demand adjustment rates were assumed to be constant throughout the time period of the model runs.

2. Medicaid Programs

Individuals receiving LTC benefits under state Medicaid programs can qualify through programs for the categorically needy or for the medically needy. Each program applies different income tests to determine eligibility.

The Medicaid categorically needy program provides care to individuals with income below a state-determined level. All persons needing long-term care services covered by the Medicaid program (SNF, ICF, ICF/MR or home health services), are screened to determine whether or not they fall below these income cutoff levels. Income tests are then applied. First, the family incomes of individuals needing LTC services are compared with categorically needy income cutoffs to determine eligibility for categorically needy

benefits. Those who are not eligible on this basis are also screened for eligibility under medically needy programs in states where they exist. This test is implemented by subtracting the average annual cost of the LTC services needed by an individual from that person's annual income. If the resulting figure is below the medically needy income cutoff level, then the individual is considered to be eligible for benefits under the medically needy programs.

Categorically and medically needy income cutoff levels were collected for each state for fiscal years 1977 through 1981 using Commerce Clearing House and from the Medicaid Medicare Management Institute publications, supplemented by phone calls to states which had missing or inconsistent information.

These cutoff levels were then forecast as follows:

- categorically needy income cutoffs:
 - for the 24 states using the federally established SSI level, income levels were estimated using forecasts of the Consumer Price Index (CPI) used by HCFA.¹⁰ SSI levels were increased yearly using the CPI, which has resulted in an average annual increase of 9.1% from 1977 to 1981.
 - for more restrictive states, we determined the historical average annual rate of increase in income cutoff levels from fiscal year 1977 to 1981. This increase was used to estimate future income cutoff levels.
- medically needy income cutoffs
 - cutoff levels were increased at their average annual rate of increase for the period 1977 to 1981.

Average annual increases and the 1990 forecasted values for each state are shown in Tables II-4 and II-5. Similar numbers were generated for multi-person families, using the income cutoffs for two-person families.

¹⁰ Estimates provided by Mark Freeland, Division of National Cost Estimates, HCFA.

TABLE II-4

AVERAGE ANNUAL INCREASE AND 1990 FORECASTS FOR
CATEGORICALLY NEEDY INCOME LEVELS
FOR NON-SSI STATES FOR ONE PERSON FAMILIES

<u>State</u>	<u>Average Annual Change FY 1977-FY 1981</u>	<u>FY 1990 Forecasted Value</u>
Alaska	9.1%	\$12,430
California	11.1	13,000
Colorado	9.9	8,223
Connecticut	7.4	7,757
Hawaii	8.5	6,331
Idaho	6.0	5,920
Illinois	5.9	3,799
Maine	8.6	6,253
Massachusetts	7.4	8,556
Michigan	8.1	6,337
Mississippi	10.7	6,740
Nebraska	7.7	7,323
Nevada	8.9	7,367
New Hampshire	12.4	9,312
New Jersey	8.3	6,419
New York	7.1	6,696
Ohio	8.2	4,878
Oklahoma	13.7	12,080
Oregon	8.6	6,304
Pennsylvania	7.8	6,370
Rhode Island	8.9	7,238
South Dakota	10.8	7,641
Vermont	8.7	7,093
Washington	5.9	5,106
Wisconsin	9.6	9,225
SSI states	9.1%	\$ 6,254

TABLE II-5

AVERAGE ANNUAL INCREASE AND 1990 FORECASTS FOR
MEDICALLY NEEDY INCOME LEVELS FOR ONE PERSON FAMILIES

<u>State</u>	<u>Average Annual Change FY 1977-FY 1981</u>	<u>FY 1990 Forecasted Value</u>
Arkansas	0%	\$1,700
California	8.8	8,614
Connecticut	11.1	9,026
D.C. ¹	13.2	9,453
Hawaii	9.6	8,215
Illinois	5.9	6,031
Kansas	2.6	4,687
Kentucky	5.1	3,436
Louisiana ¹	8.6	3,782
Maine	3.4	3,891
Maryland	12.7	8,447
Massachusetts	3.3	5,352
Michigan	5.5	5,401
Minnesota	6.0	5,555
Montana ¹	7.6	4,826
Nebraska ¹	9.7	7,592
New Hampshire	0	2,988
New York	8.2	7,521
North Carolina	5.4	3,371
North Dakota	6.3	4,991
Oklahoma	9.7	6,681
Pennsylvania	12.9	9,685
Rhode Island	10.0	10,375
Tennessee ¹	1.7	1,657
Utah ²	6.5	5,496
Vermont ³	15.5	13,097
Virginia ²	7.2	6,109
Washington ¹	7.9	6,520
West Virginia ¹	0	2,004
Wisconsin ²	0	3,396

¹ Average annual change computed using only 4 years data.

² Average annual change computed using only 3 years data.

³ Average annual change computed using only 2 years data.

Estimates of average expenditures on medical services must also be made by state for each service. The general formula used to estimate expenditures is:

$$E_{sv}(t) = C_{sv}(t) \times U_{sv}$$

where:

- $E_{sv}(t)$ is expenditures on service s in year t, in state v;
- $C_{sv}(t)$ is charges for service s, in state v, in year t; and
- U_{sv} is an annual Medicaid utilization rate for service s in state v.¹¹

Charges for SNF and ICF services were estimated using data from the National Nursing Home Survey (NNHS). The NNHS provides the average amount charged in the previous month to nursing home (SNF, ICF) patients whose primary source of payment was Medicaid. Monthly charges are estimated in the NNHS for SNF patients and ICF patients in five major states as well as the U.S. Two steps were necessary to adjust these data. First, we translated monthly charges into daily charges. To do this, we divided monthly charges by 30.4 (365 days divided by 12 months). We then adjusted the NNHS national charges to reflect state differences. This was done by multiplying the national average charge per day by the ratio of each state's Medicaid SNF and ICF expenditures per day to U.S. expenditures per day in 1977. The source of these data was the HCFA publication "Medicaid State Tables".

Using these 1977 Medicaid SNF and ICF charges per day as a base, we then forecast charges for 1978-1990. We did this by applying HCFA Division of

¹¹ Medicare utilization rates were used for home health services, because Medicaid programs do not report home health utilization to HCFA.

National Cost Estimates projections of rates of increase in nursing home costs per day to base year charges, by state. These rates of increase are shown in Table II-6. Table II-7 shows resulting forecasts of SNF charges in 1980 and 1990 for selected years.

Charges for home health services were estimated using data on home health charges from the Medicare Current Utilization Tabulation. This was the best available data to estimate private home health charges. We correlated Medicare home health charges with the GNP deflator and found that the overall correlation was 0.994 (for the U.S.). To forecast home health charges, we used forecasts of the GNP deflator available from the Division of National Cost Estimates at HCFA. Table II-8 shows resulting forecasts for home health charges for selected states.

No utilization rates were available for ICF/MR services provided to Medicaid recipients. Therefore, in order to estimate total individual expenditures, we used reimbursement per recipient, available from HCFA's Medicaid State Tables. Reimbursement per recipient was forecast using projected increases in average prices for ICF/MR services that were forecast by the Division of National Cost Estimates at HCFA.

After screening for eligibility on the basis of service needed and income, the number of eligible persons seeking services under Medicaid is determined using demand adjustment rates. These rates are used to calibrate 1977 model estimates so that they are consistent with historical data for 1977 on Medicaid recipients. These adjustment rates reflect the following factors:

- eligibility screens such as asset tests are used in addition to income tests to determine Medicaid eligibility for LTC services;

TABLE II-6

INFLATION RATES TO BE USED TO
ESTIMATE AVERAGE SNF AND ICF COSTS
PER DAY, 1978-1990
(Percentage Increase over Previous Year)

Fiscal Year	Inflation Rate
1978	8.39%
1979	9.03%
1980	10.09%
1981	10.38%
1982	9.83%
1983	9.44%
1984	9.06%
1985	8.65%
1986	8.24%
1987	7.91%
1988	7.67%
1989	7.39%
1990	7.16%

SOURCE: Unpublished projections of the National Nursing Home Input Price Index, from Mark Freeland, Division of National Cost Estimates, HCFA, adjusted to obtain fiscal year estimates.

TABLE II-7
PROJECTED MEDICAID SNF CHARGES PER DAY¹
SELECTED STATES

<u>State</u>	<u>Actual 1977</u>	<u>Forecast 1980</u>	<u>Forecast 1990</u>
California	\$24.11	\$33.75	\$ 91.03
Florida	20.39	28.54	76.99
Massachusetts	27.11	37.95	102.48
New York	45.76	64.05	172.97
Pennsylvania	22.11	30.95	83.57
Texas	20.82	29.14	78.70
U.S.	28.72	40.20	108.56

¹ To obtain forecasts, we increased charges in base year (1977) by the projected increase in nursing home costs per day, as provided by the Division of National Cost Estimates at HCFA.

TABLE II-8

PROJECTED MEDICARE HOME HEALTH CHARGES PER DAY¹
 SELECTED STATES - AGED

<u>State</u>	<u>Actual 1977</u>	<u>Forecast 1985</u>	<u>Forecast 1990</u>
California	\$28.42	\$41.46	\$111.95
Florida	30.57	41.81	108.27
Michigan	30.36	44.35	122.89
New York	30.10	37.88	84.20
Pennsylvania	22.54	28.23	72.30
Texas	14.96	36.57	90.95
U.S.	25.34	35.42	89.80

¹ Forecasts were obtained using future values of the GNP deflator in regression equations correlating past GNP deflator values with historical home health charges.

- some persons who are eligible for services under Medicaid elect not to participate in the program and others are not aware that they are eligible to receive Medicaid LTC services;

Separate demand adjustment ratios were calculated for each service. Each demand adjustment rate is equal to the ratio of total number of Medicaid categorically needy recipients in 1977 (from Medicaid program data) and the total number of eligible persons in 1977, based purely upon the income test screen. For example, if there were significantly more persons receiving ICF care than projected using model estimates of need, and there were significantly fewer persons receiving home health care than would be expected from LTC Model need estimates, then we assumed that some individuals needing home health care were getting ICF care instead. This would occur, where there was an inadequate supply of home health services. In this case, a joint demand adjustment rate was computed for ICF and home health care to reflect the fact that many persons eligible and seeking home health care were inappropriately placed in ICFs. Demand adjustment rates remain constant throughout the model.

A shortcoming of the demand adjustment calibration process is that it calibrates LTC Model Medicaid projections to Medicaid data, which is sometime incomplete or incorrect. For example, the Medicaid data reported by some states includes ICF/MR care with ICF care or personal care services (e.g., homemaker, chore services) with home health care. In these cases, we were not able to separate out ICF/MR or personal care service recipients and expenditures. Consequently, some LTC Model estimates will overestimate Medicaid, ICF and home health use and expenditures, but be consistent with state data that is reported to HCFA.

E. THE DEMAND MODULE

The Demand Module first estimates the number of persons seeking services from the Medicaid and Medicare programs. These estimates come from the Eligibility Module with adjustments made in cases where individuals are eligible for benefits under more than one program or where they select Veterans Administration LTC benefits instead. In cases where people are eligible for benefits under both programs, we assume they will select benefits under Medicare, because Medicare services are easier to obtain and they do not have a stigma associated with them that is sometimes associated with Medicaid. From the resulting estimates of the number of individuals seeking LTC benefits under these programs, we subtract estimates of the number that would use Veteran's Administration programs instead.

Estimates of VA recipients were derived using VA projections of the total number of recipients of VA nursing home services, and recipients receiving care in community nursing homes paid for by the VA. The number of recipients was distributed among states using a historical distribution provided by a one-day census of VA recipients.¹² This census also indicated that 70 percent of VA recipients receive SNF care and 30 percent receive ICF care. These estimates were used to generate estimates of the number of veterans by state and need.

Veterans were subtracted from our estimates of LTC need by age, sex, and type of service by using the following formula:

$$\text{Number of VA recipients} = \text{NM/TM} \times \text{NE/TE} \times \text{VAS},$$

^{12.} Jim Kelly, Veterans Administration Community Nursing Home Program.

where:

NM = number of males in age-sex need (ICF and SNF) cohort
 TM = total number of males over 21
 NE = number eligible for Medicare (or Medicaid) in age-sex-need (ICF-SNF) cohort
 TE = total number of people in age-sex-need cohort
 VAS = total number of VA in state-need category.

This formula provided estimates of the number of VA recipients to be subtracted from each age-sex-need cohort. The resulting estimates of demand represent the number of persons seeking a particular service that is covered by Medicaid or Medicare.

The Demand Module also calculates the annual LTC utilization that would result if all demands for services were met. This is computed by multiplying the number of persons in each cohort demanding each type of LTC service under each program by the average utilization in the same cohort and the same program. We assume that utilization patterns remain constant over time.

Because utilization data is not available for ICF/MR and Medicaid home health care, the number of persons demanding these services is not multiplied by utilization rates. Utilization and supply for these two services are measured by the number of recipients in the Model.

F. SUPPLY MODULE

The Supply Module provides estimates of the supply of long-term care services. Supply of institutional services is measured in terms of bed days available to public (Medicare and Medicaid) patients. The supply of Medicare home health is measured in terms of the number of visits available for Medicare patients. The supply of ICF/MR and Medicaid home health is measured in terms of the number of recipients that can be treated because data on total days or total visits are not available.

Currently, information on the availability of long-term care services for Medicare and Medicaid beneficiaries is not collected in any form. Data on the number of beds they have certified for Medicare or Medicaid is not a true indication of the amount of supply available for Medicare or Medicaid patients, because these beds are frequently used to treat private pay patients. Available data on home health providers suffers from this problem, and in addition, it does not include statistics on the quantity of services they provide to Medicare or Medicaid patients. Therefore, proxies had to be developed to estimate past supply of long-term care services to Medicare and Medicaid patients. In addition, we reviewed these estimates to try to establish reasonable projections of future LTC supply for Medicare and Medicaid beneficiaries.

The first step in our development of a proxy for LTC supply was to review published materials on LTC supply to Medicare and Medicaid patients and various statistical information related to LTC supply. A summary of this review is presented in Appendix B. We found that there is a consensus that in most states, both Medicare and Medicaid utilization of long-term care services is constrained by the amount of services available. Although providers could provide more services to Medicare and Medicaid patients, many prefer to provide services to private pay patients when possible because the latter patients pay higher rates. Available indicators related to the supply of institutional care found that excess supply to Medicare and Medicaid might exist in five states (Alabama, Colorado, Indiana, Nebraska, and Oklahoma). However, we contacted health planning officials in these states and found that supply was constraining utilization in all but Colorado and Nebraska.

Therefore, as a working assumption for the LTC Model, we used Medicare and Medicaid utilization as a proxy for the supply of LTC services. In the cases of ICF/MR and Medicaid home health services, data on utilization were also not available. In these cases, we used the number of recipients as a proxy for supply to Medicaid patients.

The following sections summarize our methods for forecasting of LTC services. The assumptions used were based upon review of historical trends in supply as measured by the proxies described above. A more detailed discussion of the data used is presented in Appendix D.

1. Forecasts of Institutional Services

Supply of institutional services was forecast using 1977 data estimates for 1977 and 1978 estimates for successive years. Complete data for later years was not available. Constant supply after 1978 was assumed because trends in supply were either erratic or unlikely to continue over the period of our forecasts. We explored the use of econometric equations to forecast the supply of all institutional services except ICF/MR supply. This approach was not used because a suitable forecasting equation could not be estimated. The explanatory power of econometric equations tested was good enough to predict most major variations in the supply of institutional care, however, errors for forecasting purposes would still be significant. In order to develop a reliable econometric model that captured the relationship between reimbursement and supply, information on the cost of providing SNF and ICF care under Medicare and Medicaid is needed to estimate nursing home profitability. This econometric analysis is described in Appendix D. The assumption of constant supply can easily be changed at a later time as more data becomes available.

2. Forecasts of ICF/MR Supply

For the same reasons noted above for SNF and ICF supply, ICF/MR supply was forecast using 1977 and 1978 data on recipients by state and setting this value at its 1978 level after 1978. In addition, several states did not report ICF/MR data. For these states, supply is not estimated.

3. Forecasts of Home Health Supply

Forecasts of the number of Medicare home health visits and Medicaid recipients are also made in the supply module.

The supply of Medicare home health visits are projected using HCFA data on Medicare utilization for the years 1975 through 1978. Various functional forms were tested for fit to this data, and an exponential function was found to fit best. This functional form was used to project future supply through 1990.

Supply of Medicaid home health care was measured in terms of the number of recipients that can be served. Growth in supply seemed to be consistent with the assumption of a constant annual growth rate. Consequently, forecasts were made by applying the average annual growth rate for the 1975 to 1978 period to 1977 data.

4. Supply of Hospital Administrative Care Days

Supply of hospital services for administrative care days spent waiting for a vacant nursing home bed was considered unlimited in the model. This assumption seems reasonable, because most parts of the country have more community hospital beds than are needed to treat acute care patients.

G. UTILIZATION MODULE

The Utilization Module combines the output of the Demand and Supply Modules to estimate actual utilization of services in each state under

Medicaid and Medicare. This module uses estimates of supply and demand for each LTC service under each program to estimate which demands are met and to determine when individuals are provided services in alternative settings because of inadequate supply.

ICF conducted interviews with individuals at HCFA and at state Medicaid agencies to determine patterns of placement when the demand for services exceeds supply. This review is described in Appendix C. These interviews revealed that placement patterns are similar across states. The following placement pattern was identified and used in the utilization module:

- first priority, proper placements:
 - patients demanding Medicare care are placed in SNF beds available for Medicare patients;
 - patients demanding Medicaid SNF care are placed in SNF beds available to Medicaid patients;
 - patients demanding Medicaid ICF care are placed in ICF beds;
 - patients demanding Medicaid ICF/MR care are placed in ICF/MR beds;
 - patients demanding Medicare HHA care are provided HHA care, as available;
 - patients demanding Medicaid HHA care are provided HHA care, as available;
- placement at higher-than-needed levels (in descending order of priority):
 - Medicaid ICF-level patients are placed in any remaining SNF beds available to Medicaid patients;
 - any Medicare SNF-level and Medicaid ICF-level patients who are in hospitals and could not be placed in nursing homes remain in hospitals as administrative care patients;
 - Medicaid HHA-level patients are placed in any remaining ICF beds;
- all others who have not been placed get no LTC services under Medicare or Medicaid.

In this algorithm, a person needing SNF or HHA services who is eligible for both Medicare and Medicaid is treated as a Medicare recipient.

The output of the utilization module is the number of people demanding and receiving long-term care services and their corresponding utilization. The utilization estimates include any misplacement that occurs because of inadequate supply of services, including utilization in acute care hospitals because of inadequate supply of SNF and ICF services.

H. EXPENSE MODULE

The Expense Module estimates Medicare and Medicaid payments by state for all services covered by the programs. This is done in three steps:

- the costs of services are estimated and forecast,
- reimbursement levels are forecast, and
- for Medicaid services, the state and federal share of reimbursement is forecast and applied to Medicaid program cost estimates.

This is done differently for Medicaid and Medicare services as is described below.

1. Medicare

a. Medicare SNF Care

The Medicare program covers 100 days of SNF care per spell of illness (benefit period). It covers the "cost" of the first 20 days in full, where costs are determined through audited Medicare Cost Reports. The cost of up to 80 subsequent days are also covered by Medicare, except for a monthly coinsurance amount which is increased each calendar year.

In order to estimate Medicare reimbursement per day of care in an SNF, we will estimate the average allowable cost per day in an SNF and subtract out the average coinsurance payment per covered day. To do this, we use the identity:

$$R_t = C_t - rP_t ,$$

and forecast the values of C_t and P_t , where:

- R_t is the average Medicare reimbursement per covered SNF day in year t ;
- C_t is the average allowable cost per covered day;
- P_t is the coinsurance amount required for the 21st through 100th day of SNF care in a benefit period in year t ; and
- r is the proportion of covered days that fall into the 21st through 100th day category.

In our forecasts, we will assume that r is constant. This is consistent with our assumption in the Demand Module that utilization patterns for those receiving nursing home care will not change. Tests can be run to test the sensitivity of our findings to this assumption. The value of r was calculated using Medicare Form CO-2224. Using this data we calculated the percent of days over 20 days to be 42 percent for the aged and 24 percent for the disabled. Reimbursement per day (R_t) varies by state and is available from Medicare Table AA8A. Coinsurance for 1977 was \$14.88.

Using these values and the equation presented above, we estimated C_t for 1977 for every state. Cost per day was then forecast using inflation factors for nursing home care provided by HCFA and shown in Table II-6. Coinsurance values are based upon average costs for hospital care. These were forecast using HCFA projections of hospital cost inflation and are presented in Table II-9. Using these values, reimbursement for SNF care can be forecast through 1990 using the above equation. This reimbursement level is entirely paid for by the federal government.

TABLE II-9
 AVERAGE NURSING HOME COINSURANCE RATES
 TO BE USED TO ESTIMATE
 MEDICARE SNF REIMBURSEMENTS, FY 1978-FY 1990

<u>Fiscal Year</u>	<u>Rate Per Day</u>
1977	\$14.88
1978	\$17.38
1979	19.50
1980	21.88
1981	24.75
1982	27.83
1983	31.45
1984	35.82
1985	40.82
1986	46.48
1987	52.94
1988	60.21
1989	68.37
1990	77.38

SOURCE: Figures for 1978 through 1981 are based upon actual calendar year rates. Rates for succeeding years are based upon estimates of inflation rates for hospital expenses per adjusted inpatient day, supplied by Mark Freeland, Division of National Cost Estimates, applied to the calendar year coinsurance rates two years earlier.

b. Medicare Home Health Care

The Medicare program covers home health care under both Part A and Part B. Under Part A, Medicare pays for the allowable "cost" of 100 home health visits per benefit period and requires no deductibles or coinsurance. Part B covers an additional 100 visits per calendar year and requires no coinsurance. The only deductible that applies is the general \$60.00 annual deductible that applies to all services covered under Part B.

In our cost estimates, we assumed that Medicare pays essentially the full cost of home health care. Individuals receiving this benefit are likely to have already paid for other services under Part B which would have required payment of the Part B deductible.

Because there is no distinction between Part A and Part B care other than the deductible, we estimated their combined average Medicare payment per visit.

For the base year of our forecasts, 1977, we applied the assumption that Medicare pays the full cost of home health care. This implies that the average cost per visit in each state equals the average Medicare payment per visit. Medicare costs per visit in subsequent years were estimated by applying the GNP-deflator index plus 1.52 percent per year to the 1977 value of cost per visit. The 1.52 percent difference was based upon the difference between average home health input cost inflation and the GNP deflator for the period 1976-1980. These estimates were used as the estimates of Medicare payments per visit for the years 1978-1990. Inflation factors based upon HCFA projections of the GNP-deflator are presented in Table II-10.

2. Medicaid

Estimates of Medicaid LTC payments are complicated by the fact that recipients must spend all of their income towards the cost of long-term care

TABLE II-10

INFLATION RATES TO BE USED
TO ESTIMATE AVERAGE COST PER MEDICARE
HOME HEALTH VISIT AND AVERAGE HOME HEALTH
COST PER MEDICAID HOME HEALTH RECIPIENT, 1978-1990
(Percentage Increase over Previous Year)

<u>Fiscal Year</u>	<u>Inflation Rate</u>
1978	8.0%
1979	9.1%
1980	11.0%
1981	11.30%
1982	11.40%
1983	10.65%
1984	9.82%
1985	9.42%
1986	9.02%
1987	8.70%
1988	8.47%
1989	8.27%
1990	8.07%

SOURCE: Unpublished calendar year projections of the GNP deflator, from Mark Freeland, Division of National Cost Estimates, HCFA, plus 1.52%, adjusted to obtain fiscal year estimates.

except for a small personal needs allowance. This is true for Categorically Needy as well as Medically Needy recipients. Consequently, Medicaid payments are not only a function of the cost of long-term care services, but are also a function of recipients' incomes.

Another problem that makes forecasting difficult is that no data exist on the full cost of providing nursing home care to Medicaid recipients. Our current approach was therefore to estimate total costs in the base year, 1977, by adding recipient out-of-pocket payments estimated using the LTC model to Medicaid program payments.

a. SNF and ICF Care

Medicaid SNF and ICF payment projections were made using a three-step methodology. In the first step, we estimated the "reimbursement base" used by each state in 1977 for the purpose of nursing home reimbursement. This base is the total payment that each Medicaid agency permits nursing homes, including both Medicaid and out-of-pocket payments. This base differs from costs in many states, because most states do not use cost reimbursement. Initially, we assumed that the base is equal to 1977 charges per day times the number of Medicaid days. Using these values, we estimated the corresponding total Medicaid payments for SNF and ICF care assuming that Medicaid eligibles pay all of their income except for a personal needs allowance.

In step 2, we adjusted the magnitude of the reimbursement base for each service in each state so that Medicaid reimbursement in each state equaled the actual 1977 values. For example, if the first step produced an estimate that Medicaid paid \$200 million for ICF care in a state in 1977 and it actually paid \$150 million, then we reduced our initial estimate of the reimbursement

base by \$50 million. Dividing the final reimbursement base by the number of Medicaid days of care in that state in 1977, we obtained an estimate of the 1977 reimbursement base per day for nursing home care in each state.

In step 3, we assumed that the reimbursement base per day under Medicaid increased in proportion to the cost of nursing home care. Thus, for each year of our forecasts, we inflated the average reimbursement base per day by the nursing home cost inflation rates projected by HCFA. Then we estimated Medicaid payments by subtracting from the reimbursement base the amount by which recipient incomes exceeded their personal needs allowance.

b. ICF/MR Care

Medicaid ICF/MR payments were estimated using the same method used for SNF and ICF care. However, we estimated the 1977 reimbursement base per recipient for each state covering ICF/MR care rather than the base per day, because HCFA does not have data on ICF/MR days of care provided in each state. Similarly, in step 3 of forecasting Medicaid payments, the ICF/MR reimbursement base per recipient was used instead of the base per day. Inflation rates that were applied to the base per recipient to estimate future reimbursement bases are given in Table II-11.

c. Home Health Care

Medicaid home health payments were estimated using a similar procedure to that for Medicare home health services. However, Medicaid expenses per recipient were used rather than Medicaid expenses per visit, because HCFA does not have data on the number of visits that were covered by Medicaid in each state.

TABLE II-11

INFLATION RATES TO BE USED TO
 ESTIMATE AVERAGE ICF/MR COST
 PER RECIPIENT, 1978-1990
 (Percentage Increase over Previous Year)

<u>Fiscal Year</u>	<u>Inflation Rate</u>
1978	24.20%
1979	20.28%
1980	15.38%
1981	14.15%
1982	13.82%
1983	13.23%
1984	12.50%
1985	11.85%
1986	11.18%
1987	10.55%
1988	10.03%
1989	9.53%
1990	8.95%

SOURCE: Unpublished calendar year projections from Mark Freeland adjusted to obtain fiscal year estimates, Division of National Cost Estimates, HCFA.

3. Administrative Care Days

Reimbursement for administrative care days was calculated using the average accomodation charge per day by state, the percent of total hospital charge reimbursed, and the inflation factor for hospital revenue per day. The average accomodation charge per day was available by state from the Office of Statistics and Data Management at HCFA. For 1977 the percent of total hospital charges reimbursed was 72.8 percent. This data resulted in the average reimbursement for accomodations by state for 1977. These costs were forecast using the projected increase in hospital revenues per day provided by HCFA Division of National Cost Estimates. These values are shown in Table II-12.

4. Medicaid Federal and State Shares

Expenses for the Medicaid program were divided between federal and state government according to a formula based upon state income. The Federal Financial Participation (FFP) rates are calculated biannually in the months preceding the beginning of an even numbered fiscal year. The formulas to calculate FFP's are as follows:

$$\text{Percent state share of Medicaid Cost} = \frac{45 (\text{Per capita income of state})^2}{(\text{National average per capita income})^2}$$

The federal government pays the remaining cost. The federal share must be at least 50 percent, and not more than 83 percent of total Medicaid expenditures. In this formula, per capita incomes averaged over the three most recent years are used.

In the LTC Model, the FFP is calculated in the same fashion using projections of state per capita income from the Bureau of Economic Analysis.

TABLE II-12

INFLATION RATES TO BE USED TO FORECAST
COST OF ADMINISTRATIVE CARE DAYS

Fiscal Year	<u>Inflation Rate</u> (Percent Increase from Previous Year)
1978	12.7%
1979	11.7
1980	12.2
1981	13.0
1982	13.8
1983	13.9
1984	13.9
1985	14.1
1986	13.8
1987	13.6
1988	13.2
1989	12.4
1990	12.1

SOURCE: Unpublished calendar year projections of expenses per patient day, from Mark Freeland, Division of National Cost Estimates, HCFA, adjusted to obtain fiscal year estimates.

FFP's are forecast by state and change every other year of the model. Actual values are used for fiscal years 1977, 1978, and 1979. Table II-13 presents the 1977 and 1990 federal shares derived according to this formula.

I. TITLE XX LONG-TERM CARE SERVICES

The Long-Term Care Model forecasts costs and uses of Title XX programs separately from that of Medicare and Medicaid. Title XX of the Social Security Act provides funds to states to implement social service programs. These services include four which have significant long-term care components:

- adult day care
- chore services
- homemaker services
- foster care for adults.

Title XX accounted for seven percent of the total national expenditures on long term care under Medicare, Medicaid, and Title XX in 1977. Expenditures on day care and foster care were only one percent of the total. Therefore the long term care model forecasts expenditures on only two of the most significant components--homemaker and chore services.

Title XX eligibility is determined at the state level. AFDC and SSI recipients must be eligible for some Title XX services. A state also has the option of making other targeted groups of individuals eligible for services. Income requirements can vary by geographic area, by service, or by category of recipient. This results in eligibility requirements that vary within a state. Therefore the LTC Model does not attempt to screen explicitly for eligibility, as it does for Medicare and Medicaid.

Our projection methodology for the Title XX program was simply to extrapolate past trends in expenditures and recipients. A more detailed approach would not be reasonable because:

TABLE II-13

FEDERAL SHARE OF MEDICAID PAYMENTS

	<u>FY 1977</u>	<u>FY 1990</u>
Alabama	73.79%	67.84%
Alaska	50.00	50.00
Arizona	60.48	60.32
Arkansas	74.60	71.03
California	50.00	50.00
Colorado	54.69	52.43
Connecticut	50.00	50.00
Delaware	50.00	50.00
D.C.	50.00	50.00
Florida	57.34	58.83
Georgia	66.10	65.02
Hawaii	50.00	51.13
Idaho	68.18	64.34
Illinois	50.00	50.00
Indiana	57.47	55.65
Iowa	57.13	54.56
Kansas	54.02	55.38
Kentucky	71.37	63.71
Louisiana	72.41	63.98
Maine	70.60	69.62
Maryland	50.00	50.00
Massachusetts	50.00	53.69
Michigan	50.00	50.00
Minnesota	56.84	53.78
Mississippi	78.28	74.93
Missouri	58.98	59.98
Montana	63.21	63.90
Nebraska	55.59	58.63
Nevada	50.00	50.00
New Hampshire	60.28	60.40
New Jersey	50.00	50.00
New Mexico	73.29	67.50
New York	50.00	51.74
North Carolina	68.03	66.08
North Dakota	57.59	59.78
Ohio	53.39	53.34
Oklahoma	67.42	61.55
Oregon	59.04	54.36
Pennsylvania	55.39	55.01
Rhode Island	56.55	58.60
South Carolina	73.58	69.73
South Dakota	67.23	66.82
Tennessee	70.43	66.07
Texas	63.59	55.96
Utah	70.04	67.61
Vermont	69.82	67.40
Virginia	58.34	56.15
Washington	53.72	50.00
West Virginia	71.90	62.95
Wisconsin	59.91	58.20
Wyoming	60.94	50.00

- data is not available on utilization of services
- Title XX data reported to the federal government is frequently incorrect;
- Title XX program data does not distinguish between long-term care and short-term care users of homemaker and chore services; and
- Title XX accounts for a relatively small share (seven percent) of federal long-term care expenditures.

In order to estimate the proportion of Title XX users of homemaker and chore services that are long-term care users, we assumed that only Supplemental Security Income (SSI) recipients using these services were receiving long-term care. This assumption seemed reasonable, because most SSI recipients are elderly and disabled and most other users are young families who are AID to Families with Dependent Children (AFDC) recipients. Table II-14 shows the national percentage of chore and homemaker recipients that were SSI-recipients. These percentages were applied to data for each state to estimate the portion of Title XX expenditures and recipients that were attributable to long-term care during the years 1976 through 1979.

TABLE II-14

PROPORTION OF NATIONAL TITLE XX RECIPIENTS
AND EXPENDITURES ACCOUNTED FOR BY SSI RECIPIENTS

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
<u>Recipients</u>				
Chore	77%	66%	64%	60%
Homemaker	57%	63%	62%	58%
<u>Expenditures</u>				
Chore	84%	73%	72%	69%
Homemaker	66%	61%	60%	69%

SOURCE: Office of Human Development Services, Social Services, USA, DHHS, 1976-78 editions, and unpublished, preliminary FY 1979 data.

Then, with the exception of the states in which recipients or expenditures declined steadily over time, we forecast each state's Title XX LTC expenditures and recipients through 1990 by extrapolating past trends from fiscal year 1976 through 1979. Using a trend line, we determined for each state the average annual growth rate from 1976 to 1979; we then applied this growth rate from 1979 to 1990. Data which were clearly incorrect were excluded from our analysis of trends.

For six states where expenditures and/or recipients declined, we apply different forecasting assumptions, which are based upon telephone conversations with state Title XX officials.

In five of the states (Idaho, South Carolina, Illinois, Maryland, and New York), we found that officials expected the number of recipients to fall. Generally this was occurring because Title XX expenditures were above the federal allotment and some of the financing was being shifted to other programs. Hence, in these states, we assumed that Title XX LTC expenditures on homemaker/chore services would remain constant, and that expenditures per recipient would remain roughly constant in real terms. Using HCFA's projection that the GNP-deflator will be 134 percent higher in 1990 than in 1979, we estimated the corresponding nominal expenditure per recipient in 1990. Dividing this into the assumed 1990 expenditure provided an estimate of Title XX LTC recipients in 1990 in the five states. To estimate changes in the number of recipients between 1979 and 1990, we assumed a linear time trend.

In the case of West Virginia, we adopted a different set of assumptions, because officials felt that the number of recipients would be about constant. For this state, we assumed no change in the number of recipients and estimated

1990 total LTC expenditures, assuming that real expenditures per recipient would be the same as its 1979 value. Linear interpolation was used to estimate expenditures for the years between 1979 and 1990.

Tables II-15 and II-16 show the actual 1979 values of LTC expenditures and recipients (respectively) as well as the growth per year which we assume for the period 1980 to 1990. :

TABLE II-15

TITLE XX LTC EXPENDITURE GROWTH ESTIMATES, BY STATE
(in \$000)

State	1979	Assumed Growth	1990 Forecast
	Expenditures	Per Year 1979-1990	
Alabama	\$ 700	\$ +154	\$ 2,394
Alaska	0	0	0
Arizona	904	+280	3,984
Arkansas	662	+144	2,246
California	140,052	+23,131	394,493
Colorado	4,672	+646	11,778
Connecticut	0	0	0
Delaware	276 ^{1/}	+27	573
D.C.	1,539	+193	3,662
Florida	3,346	+461	8,417
Georgia	3,953	+1,193	17,076
Hawaii	1,549	+80	2,429
Idaho	969	0	969
Illinois	11,095	0	11,095
Indiana	2,895 ^{2/}	+608	9,583
Iowa	6,911	+924	17,075
Kansas	2,280	+545	8,275
Kentucky	3,614	+1,154	16,308
Louisiana	9,694	+1,134	22,168
Maine	1,290	+102	2,412
Maryland	1,919 ^{2/}	0	1,919
Massachusetts	20,984	+3,065	54,699
Michigan	30,868	+9,032	130,220
Minnesota	7,212	+767	15,649
Mississippi	2,701	+825	11,776
Missouri	2,351	+490	7,741
Montana	947	+82	1,849
Nebraska	3,806	+443	8,679
Nevada	477	+76	1,313
New Hampshire	1,279	+234	3,853
New Jersey	6,386	+2,058	29,024
New Mexico	2,657	+392	6,969
New York	12,019	0	12,019
North Carolina	6,909	+3	6,942
North Dakota	2,267	+293	5,490
Ohio	7,985	-213	5,642
Oklahoma	147 ^{3/}	+39	615
Oregon	2,427	+228	4,935
Pennsylvania	775	+116	2,051
Rhode Island	1,383	+170	3,253
South Carolina	1,043	0	1,043
South Dakota	1,029	+229	3,548
Tennessee	1,610	+209	3,909
Texas	47,820	+5,367	106,857
Utah	0	0	0
Vermont	188	+25	463
Virginia	7,914	+977	18,661
Washington	16,388	+2,041	38,839
West Virginia	2,044	+249	4,783
Wisconsin	4,914	+433	9,677
Wyoming	254	+71	1,035
U.S.	\$395,104	\$58,477	\$1,038,351

^{1/} 1979 amount estimated using 1978 amount and assumed growth per year.^{2/} 1979 amount estimated using 1977 amount and assumed growth per year.^{3/} Estimated amount.

TABLE II-16

TITLE XX LTC RECIPIENTS, GROWTH ESTIMATES, BY STATE

<u>State</u>	<u>1979 Recipients</u>	<u>Growth Per Year 1979-1990</u>	<u>1990</u>
Alabama	2,228	+380	6,408
Alaska	0	0	0
Arizona	923	+309	4,322
Arkansas	3,613	+821	12,644
California	48,042	+1,574	65,356
Colorado	1,752	+71	2,533
Connecticut	0	0	0
Delaware	124	+22	366
D.C.	411	+50	961
Florida	4,240	+182	6,242
Georgia	3,068	+557	9,195
Hawaii	677	+79	1,546
Idaho	608	-32	256
Illinois	5,724	-298	2,446
Indiana	1,221	+366	5,247
Iowa	7,484	+193	9,607
Kansas	3,689	+776	12,225
Kentucky	4,733	+1,532	21,585
Louisiana	2,349	+436	7,145
Maine	1,719	+124	3,083
Maryland	1,718	-89	739
Massachusetts	14,504	+1,013	25,647
Michigan	12,742	+3,701	53,453
Minnesota	5,607	+258	8,445
Mississippi	2,127	+648	9,255
Missouri	3,670	+434	8,444
Montana	1,311	+263	4,204
Nebraska	3,555	+468	8,703
Nevada	401	+47	918
New Hampshire	1,173	+215	3,538
New Jersey	5,510	+708	13,298
New Mexico	2,788	273	5,791
New York	6,304	-328	2,696
North Carolina	5,395	776	13,931
North Dakota	1,077	111	2,298
Ohio	3,754	1,864	24,258
Oklahoma	102	24	366
Oregon	3,096	427	7,793
Pennsylvania	9,398	806	18,264
Rhode Island	1,177	348	5,005
South Carolina	2,592	-135	1,107
South Dakota	1,049	216	3,425
Tennessee	1,938	-103	805
Texas	27,271	846	36,577
Utah	0	0	0
Vermont	225	58	863
Virginia	3,694	144	5,278
Washington	6,978	1,673	25,381
West Virginia	3,689	0	3,689
Wisconsin	10,514	2,184	34,538
Wyoming	461	47	978
U.S.	238,680	24,039	503,109

CHAPTER III

MODEL PROJECTIONS

In this chapter we review several projections that were made using the Long-Term Care Model. These projections demonstrate the types of estimates the Model can produce. In addition, we discuss three policy simulations of possible changes in Medicaid or Medicare long-term care policies designed to reduce LTC expenditures. We note the implications of these simulations for general strategies to contain federal and state LTC costs.

A. THE BASE CASE

In this report, we refer to projections using the assumptions described in Chapter II as base case projections. These projections assume that no major policy changes are made in the Medicare, Medicaid, and Title XX long-term care programs. These projections are intended to provide a set of estimates against which possible changes in federal or state policies can be compared.

Key assumptions used to produce these projections include the following:

- the quantity of institutional services (SNF, ICF, ICF/MCR) available to Medicaid and Medicare patients will not grow under current policies;
- Medicaid income eligibility requirements continue to follow their past trends;
- the average quantity of services used per year by each Medicaid and Medicare recipient remains at its 1977 level;
- the federal share of Medicaid LTC expenditures is based upon the formula described in Section H of Chapter II;

- the Medicare coinsurance requirements formula is still used to calculate coinsurance payments for SNF days beyond the twentieth day; and
- Title XX long-term care programs continue to follow their past growth trends.

Base case projections are based upon Bureau of Economic Analysis forecasts of population and average per capita income for each state. These assumptions seemed reasonable for use in trying to replicate actual Medicare and Medicaid program experience since 1977 and for forecasting future trends in the two programs.

As more recent population and income projections at the state level become available, they can be used to update the Model's input data sets. In addition, major changes in the Medicaid, Medicare, and Title XX long-term care programs can be incorporated as they occur in order to modify the base case projections.

B. COMPARISON OF BASE CASE WITH HISTORICAL DATA

Although the primary purpose of the Long-Term Care Model is for policy analysis rather than forecasting, it is still necessary to test the Model's validity. This can be done by comparing base case projections against reported, historical data for the programs modelled. Data available for such comparisons are primarily unpublished tabulations prepared by the Medicare and Medicaid programs. There are currently no Title XX long-term care data available that can be used to test the validity of the LTC Model's Title XX projections. However, because these projections are extrapolations of estimates of 1977-1979 Title XX expenditures and recipients we believe them to be valid estimates for the future.

1. Medicare

Table III-1 compares base case projections for the Medicare program with unpublished data supplied by the Division of Information Analysis, Office of Statistics and Data Management, HCFA. Recipient data are not included, because 1978 and 1979 statistics are not available and 1977 data are only available for calendar year rather than fiscal year. This table shows that in most cases the base case U.S. projections are within 2 to 3 percent of HCFA's national estimates. The primary discrepancy between the base case projections and HCFA estimates are for 1979 SNF expenditures and utilization. Model projections were 6 to 8 percent higher than reported Medicare data. The difference in expenditures is directly related to the Model's over-estimate of Medicare SNF utilization. This discrepancy might reflect a downturn in the supply of SNF care due to Medicare reimbursement that is becoming less competitive with private rates over time. However, it is too early to assess whether the base case supply assumption should be changed at this time.

TABLE III-1

COMPARISON OF LONG-TERM CARE MODEL MEDICARE PROJECTIONS
FOR 1977-1979 WITH ESTIMATES REPORTED BY HCFA

	Fiscal Year					
	1977		1978		1979	
	<u>Model</u>	<u>HCFA</u>	<u>Model</u>	<u>HCFA</u>	<u>Model</u>	<u>HCFA</u>
<u>SNF</u>						
Expenditures (\$ Million)	\$309	\$312	\$308	\$310	\$347	\$320
Patient Days (Thousands)	9,613	9,697	8,889	9,003	8,932	8,381
<u>Home Health</u>						
Expenditures (\$ Million)	\$322	\$343	\$397	\$406	\$480	\$494
Visits (Millions)	14.7	15.0	16.7	16.5	18.5	18.7

SOURCE: Unpublished Medicare tabulations prepared by the Division of Information Analysis, Office of Statistics and Data Management, HCFA.

2. Medicaid

Table III-2 presents a similar comparison for 1977-79 Medicaid national totals. As the table's footnotes indicate, national estimates reported by HCFA exclude several states that did not submit complete program data. Therefore, comparisons were made by excluding base case projections for the missing states to make the projections comparable for each year and each service. The HCFA estimates are based upon state submissions of Medicaid Forms 2082 and 120. These data, especially recipient counts, are not very accurate in many states.

Recognizing the shortcomings of the Medicaid data reported to HCFA, the base case Medicaid projections are generally close to their corresponding reported values. Two major deviations were found. Specifically they are:

- projected 1979 home health expenditures are significantly higher than estimates reported by HCFA, even though the 1979 home health recipient projection was lower than HCFA estimates; and
- projected 1979 ICF/MR expenditure and recipient projections were lower than HCFA estimates by about 12 percent.

Comparison of individual state projections with HCFA estimates revealed the primary reasons for these differences.

In the case of the home health projections, the major differences between the base case projections and HCFA estimates were primarily due to three states--New York, Pennsylvania, and Wisconsin. In each of these states, the Long-Term Care Model projected that the number of Medicaid home health recipients would increase over time due to aging and increasing populations. By contrast, HCFA estimates show that the number of Medicaid home health recipients in these three states declined. This discrepancy is perhaps due to changes in the nature of Medicaid home health coverage in the four states

TABLE III-2

COMPARISON OF LONG-TERM CARE MODEL MEDICAID
PROJECTIONS FOR 1977-1979 WITH HCFA ESTIMATES

Service	Fiscal Year			
	1977	1978	1979	
	Model	HCFA	Model	HCFA
<u>SNF</u>				
Recipients (Thousands)	630	631	632	634
Expenditures (\$ Millions)	\$2,698	\$2,687	\$2,958	\$3,027
Patient Days (Millions)	98.7 a/	98.8 a/	88.2 b/	90.3 b/
				86.7 c/
				599
				\$3,369
				83.9 c/
<u>ICF</u>				
Recipients (Thousands)	748	749	738 d/	751
Expenditures (\$ Millions)	\$2,648	\$2,647	\$2,973	\$3,436
Patient Days (Millions)	137 e/	140 e/	136 f/	136 g/
				760
				\$3,771
				147 g
<u>Home Health</u>				
Recipients (Thousands)	331	344 m/	378	428
Expenditures (\$ Millions)	170	180	208	254
<u>ICF/MR</u>				
Recipients (Thousands)	101	101	96 h/	99 i/
Expenditures (\$ Millions)	890	871	1,055 j/	1,277
				113 i/
				1,480 i/

SOURCE: Unpublished statistics Medicaid Program Data Branch, HCFA.

- a/ Excludes Connecticut, Maine, Rhode Island, New York, Colorado, Wyoming.
- b/ Excludes Maine, New York, Florida, Wisconsin, Montana, South Dakota, Wyoming.
- c/ Excludes Maine, Massachusetts, New York, Wisconsin, Colorado, Wyoming, Alaska.
- d/ Excludes Vermont.
- e/ Excludes Wisconsin and the states listed in footnote a/.
- f/ Excludes Maine, Rhode Island, New York, Virginia, Florida, Colorado, South Dakota, Wyoming, and Alaska.
- g/ Excludes Maine, Massachusetts, Rhode Island, New York, Virginia, West Virginia, Wisconsin, Colorado, Wyoming, and Alaska.
- h/ Excludes Rhode Island, because it did not report 1978 recipient data to HCFA; excludes Indiana and Nevada, which were not projected due to insufficient data; excludes Wisconsin, because recipient could report to HCFA was clearly incorrect.
- i/ Excludes New Hampshire, Indiana, and Nevada, which were not included in projections due to insufficient data.
- j/ Excludes Indiana and Nevada, which were not included in the projections; excludes Wisconsin because expenditure data reported to HCFA was clearly incorrect.
- m/ Includes correction to Connecticut.

and/or reporting problems. In New York and Wisconsin, the former reason seems plausible, because HCFA recipient estimates steadily declined from 1977 to 1979. In these cases, declines might be attributable to stricter application of eligibility requirements or declining supply of services for Medicaid patients. Closer examination of these states is needed to determine whether to revise base case assumptions.

It is generally known that Medicaid recipient counts reported by Pennsylvania are not reliable. This problem might be the cause of differences found for that state. Medicaid home health recipients reported for 1977, 1978 and 1979 were 17,889, 48,242, and 6,229, respectively. This pattern seems unlikely. Further research is needed to improve these estimates and recalibrate the Pennsylvania Medicaid estimates.

In the case of ICF/MR projections, the Long-Term Care Model primarily underestimated the number of recipients in five states--Kansas, Ohio, Pennsylvania, Texas, and Washington. This underestimate resulted in proportionate underestimates in ICF/MR expenditures. In Kansas, Ohio, Texas, and Washington, we underestimated the underlying demand for ICF/MR care. Apparently, there was greater unmet demand in 1977 than was assumed in our calibration assumptions, and/or these states broadened their eligibility for these services either explicitly or through their implementation of the ICF/MR benefit. In Pennsylvania, the Long-Term Care Model underestimated the supply of ICF/MR services. We expect that these differences might reflect efforts of state governments to transfer mental hospital patients to nursing homes. This practice was quite common in the late 1970's, and it provided a means for state government to get partial federal funding for the care of these patients through the Medicaid program. Further research is needed to assess whether

this practice occurred in the five states noted above, and whether it increased the demand for, or supply of, Medicaid ICF/MR services. If so, then the ICF/MR demand and supply assumptions for these states will have to be adjusted accordingly.

In summary, we find that the projections provided by the LTC model seem quite reasonable when compared to actual HCFA program data. Medicare projections are quite close through 1979. However, our comparison revealed that further research may be needed to determine whether there is a long-term trend towards declining SNF use. If this is so, the reasons for this decline need to be identified and base case SNF supply assumptions may need to be modified. The Medicaid projections also appear reasonable. Modifications might be desirable for seven states in which home health or ICF/MR projections are significantly different from HCFA estimates for 1979. Because of the relatively poor quality of some of the data reported to HCFA, more information is needed to determine whether discrepancies between Model projections and HCFA data are caused by inaccurate data reported to HCFA, or inaccurate Model assumptions.

C. CURRENT ESTIMATES AND PLACEMENT PATTERNS

The Long-Term Care Model also provides information about the current characteristics of the federal LTC programs which may be useful for other applications. Useful findings include estimates of the average per diem payments to nursing homes by Medicaid programs and the extent of inappropriate placement of persons needing long-term care.

1. Nursing Home Payments for Medicaid Residents

Inadequate nursing home reimbursement is commonly cited as a major cause of inadequate nursing home supply for Medicaid-eligible persons. One difficulty in assessing the adequacy of Medicaid nursing home payments is that there is no national data base which report the total amount paid by Medicaid recipients including the amount paid from their own income. The National Nursing Home Survey collected information on total payments to nursing homes, but its data is not state-specific and the most recent data are for 1976 and 1977. Data reported to HCFA by the states estimate the amounts paid to nursing homes by the Medicaid programs only.

Table III-3 presents estimates of total 1981 per diem payments for Medicaid SNF and ICF care in each state. In fiscal year 1981, we estimate that the total payment averaged \$49.98 per day for Medicaid SNF care and \$34.71 per day for ICF care. Table III-3 also shows the proportions of the payments that are paid by residents rather than the Medicaid programs. The per diem payment figures vary significantly across states. This reflects differences in the types of patients placed in SNFs and ICFs in the state, as well as geographical differences in the cost of nursing home inputs, such as labor and supplies.

Table III-3 indicates that in fiscal year 1981, out-of-pocket payments for Medicaid residents averaged 25 percent of total payments for Medicaid SNF care and 20 percent for ICF care. Differences in the percentages of nursing home payments that are from out-of-pocket expenses primarily reflect differences in Medicaid SNF and ICF income eligibility requirements. In all states, Medicaid recipients must pay all of their income to the nursing home except for a

TABLE III-3

ESTIMATES OF THE AVERAGE PER DIEM AMOUNTS PAID TO
NURSING HOMES FOR MEDICAID RESIDENTS IN 1981 AND
THE PROPORTION PAID BY RESIDENTS, BY STATE^{a/}

State	Average Payments Per Day		Resident Out-of-Pocket Payments As A Percent of Total Payments	
	SNF	ICF	SNF	ICF
Alabama	\$ 28.13	\$25.98	11%	11%
Alaska	143.26	81.38	9%	7%
Arkansas	32.93	36.08	30%	19%
California	48.93	38.39	33%	33%
Colorado	34.22	26.74	24%	20%
Connecticut	55.48	35.15	28%	32%
Delaware	31.95	41.56	12%	6%
District of Columbia	58.60	35.27	37%	28%
Florida	27.37	24.39	12%	13%
Georgia	22.90	43.42	14%	10%
Hawaii	90.83	69.32	25%	21%
Idaho	29.54	26.79	13%	10%
Illinois	40.33	28.38	33%	31%
Indiana	41.97	26.68	9%	9%
Iowa	52.05	24.72	17%	10%
Kansas	40.16	27.01	38%	30%
Kentucky	59.02	34.17	28%	24%
Louisiana	28.65	30.96	31%	23%
Maine	57.94	38.28	28%	20%
Maryland	47.56	39.81	30%	25%
Massachusetts	49.76	44.03	32%	25%
Michigan	53.98	43.42	28%	26%
Minnesota	46.09	30.77	28%	29%
Mississippi	27.73	25.79	9%	16%
Missouri	25.18	23.62	19%	12%
Montana	35.27	30.39	25%	22%
Nebraska	42.16	25.72	33%	29%
Nevada	34.91	32.27	9%	11%
New Hampshire	73.72	37.54	38%	21%
New Jersey	44.94	38.80	12%	7%
New Mexico	58.20	28.35	20%	8%
New York	103.95	79.01	19%	24%
North Carolina	51.53	48.14	32%	27%
North Dakota	41.42	29.23	26%	27%
Ohio	29.40	24.61	6%	9%
Oklahoma	40.64	31.89	34%	26%
Oregon	31.21	23.53	19%	12%

TABLE III-3
(Continued)

ESTIMATES OF THE AVERAGE PER DIEM AMOUNTS PAID TO
NURSING HOMES FOR MEDICAID RESIDENTS IN 1981 AND
THE PROPORTION PAID BY RESIDENTS, BY STATE^{a/}

State	Average Payments Per Day		Resident Out-of-Pocket Payments As A Percent of Total Payments	
	SNF	ICF	SNF	ICF
Pennsylvania	41.56	35.84	34%	33%
Rhode Island	54.41	53.62	33%	37%
South Carolina	40.31	31.75	8%	8%
South Dakota	22.99	21.07	14%	12%
Tennessee	65.83	34.27	42%	22%
Texas	33.83	24.96	13%	10%
Utah	44.14	41.86	28%	18%
Vermont	62.47	44.17	40%	22%
Virginia	75.13	46.75	26%	22%
Washington	28.79	25.65	35%	32%
West Virginia	49.49	40.25	38%	24%
Wisconsin	39.53	27.29	30%	28%
Wyoming	23.90	22.17	8%	7%
United States	\$ 49.98	\$34.71	25%	20%

^{a/} Average payments include amounts paid by Medicaid and amounts paid by residents as out-of-pocket expenses.

relatively small monthly personal needs allowance. Hence, states with higher income eligibility cut-offs generally have higher out-of-pocket payment percentages.

Furthermore, thirty states have Medically Needy Programs which permit Medicaid recipients to spend their income down to categorically needy income levels to qualify for Medicaid benefits. In these states, the proportions of total costs paid by residents are even higher. States with Medically Needy programs generally have out-of-pocket payment percentages that exceed 25 percent. Other states generally have out-of-pocket payment percentages that are lower than 15 percent. This difference highlights a significant characteristic of Medicaid LTC programs that must be taken into account in analyses of the cost impact of tightening income eligibility tests. If income eligibility criteria are tightened, Medicaid program cost reductions will be less than proportional to recipient reductions because persons contributing the most to the cost of their care are made ineligible.

2. Inappropriate Use of Service

The Long-Term Care Model also provides estimates of the extent to which persons requiring long-term care are inappropriately placed under Medicare or Medicaid. Our survey of persons familiar with these programs found that people who are inappropriately placed are usually provided higher levels of care than they require. Among Medicare and Medicaid recipients, hospitalized persons needing SNF care sometimes remain in a hospital if SNF beds are not available. Similarly, persons needing home health care are sometimes placed in ICFs. In the Long-Term Care Model, we assume that these misplacements occur when the supply of needed services is inadequate and there is an excess supply of a higher level service. No data exist that could be used to

reliably calibrate the extent that misplacement occurs. Nonetheless, the LTC Model can be used to indicate trends in inappropriate long-term care utilization.

Table III-4 presents 1977 and 1981 base case national estimates of Medicare and Medicaid excess demand (i.e., demand minus supply) for SNF and Medicaid home health services. These estimates imply that in recent years, inappropriate use of hospitals by persons needing SNF care has been growing and inappropriate use of ICF care under Medicaid has been declining. Table III-4 shows that the amount by which unmet Medicare and Medicaid SNF demand (measured by days of SNF care sought minus days of SNF care available) grew by about 2 million and 22 million days, respectively. The LTC Model estimates that this resulted in about 110,000 more persons remaining in a hospital instead of being placed in a SNF.

TABLE III-4

MEDICARE AND MEDICAID LTC DEMAND AND SUPPLY IMBALANCES
AFFECTING INAPPROPRIATE PLACEMENT, 1977 AND 1981

	<u>1977</u>	<u>1981</u>
<u>Medicare</u>		
Excess SNF Demand (millions of days)	.11	.19
<u>Medicaid</u>		
Excess SNF Demand (thousands of days)	-6	28
Excess ICF Demand (millions of days)	-60	-24
Excess Home Health Demand (thousands of recipients)	360	200

In the base case projections, inappropriate use of Medicaid ICF benefits declined. In 1977, a substantial portion of Medicaid ICF use seems to have been generated by persons needing home health care. This fell by 1981, because there was a drop in the amount by which Medicaid ICF supply exceeded Medicaid ICF demand. This change meant that fewer persons unable to get home health care could be placed in ICFs instead. Persons unable to obtain either type of care would receive no Medicaid LTC benefits. The LTC Model estimates that from 1977 to 1981 the number of persons inappropriately placed in ICFs dropped from about 270,000 persons to about 125,000 persons.

D. SUMMARY OF BASE CASE PROJECTIONS

The base case projections of the Long-Term Care Model indicate what LTC trends might develop under current Medicare, Medicaid, and Title XX policies. Table III-5 through Table III-7 present summary information on base case projections through 1990. A more complete set of tables including tables with state-by-state detail is included in Appendix E.

1. Expenditures

Table III-5 shows that from 1977 to 1990, total Medicare, Medicaid, and Title XX long-term care expenditures will grow at a 13 percent average, annual rate. Of the three programs, Medicaid will grow the fastest, at a 13.2 percent average annual rate, and Medicare will grow at about 12.4 percent per year. Under the base case assumptions, Title XX will grow more slowly, at 10.6 percent per year. Using HCFA projections of health care cost inflation, the fastest period of growth over the 1977 to 1990 time horizon will occur between 1980 and 1985. This result follows from the assumption that inflation rates will be highest between 1980 and 1985. During this period, LTC expenditures under all programs will nearly double.

TABLE III-5

BASE CASE LONG-TERM CARE EXPENDITURE PROJECTIONS, 1977-1990
(\$ Millions)

	<u>1977</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>Average Annual Rate of Change, 1977-1990</u>
<u>Medicare</u>					
SNF	\$309	\$392	\$670	\$993	9.4%
Home Health	<u>322</u>	<u>581</u>	<u>1,094</u>	<u>1,895</u>	14.6%
Subtotal	631	973	1,764	2,888	12.4%
<u>Medicaid</u>					
SNF	2,698	3,975	7,625	12,753	12.7%
ICF	2,648	3,948	7,302	12,079	12.4%
Home Health	170	316	877	2,246	22.0%
ICF/MR	<u>890</u>	<u>1,509</u>	<u>2,789</u>	<u>4,971</u>	14.1%
Subtotal	6,406	9,748	18,593	32,049	13.2%
<u>Title XX</u>	<u>279</u>	<u>454</u>	<u>746</u>	<u>1,038</u>	10.6%
Total	\$7,316	\$11,175	\$21,103	\$35,975	13.0%

TABLE III-6

FEDERAL AND STATE SHARES OF BASE CASE
LONG-TERM CARE EXPENDITURES, 1977-1990
(\$ Millions)

	<u>1977</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>Average Annual Rate of Change, 1977-1990</u>
<u>Federal</u>					
Medicare	\$631	\$973	\$1,764	\$2,888	12.4%
Medicaid	3,598	5,408	10,292	17,673	13.0%
Title XX	<u>209</u>	<u>340</u>	<u>559</u>	<u>778</u>	10.6%
Subtotal	\$4,438	\$6,721	\$12,615	\$21,339	12.8%
<u>State</u>					
Medicaid	\$2,808	\$4,340	\$8,301	\$14,376	13.4%
Title XX	<u>70</u>	<u>114</u>	<u>187</u>	<u>260</u>	10.6%
Subtotal	2,878	4,454	8,488	14,636	13.3%
Total	\$7,316	\$11,175	\$21,103	\$35,975	13.0%

TABLE III-7

BASE CASE LONG-TERM CARE RECIPIENT PROJECTIONS, 1977-1990
(Thousands)

	<u>1977</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>Average Annual Rate of Change, 1977-1990</u>
<u>Medicare</u>					
SNF	289	271	271	273	- 0.4%
Home Health	<u>712</u>	<u>975</u>	<u>1,108</u>	<u>1,271</u>	4.6%
Subtotal	1,001	1,246	1,379	1,544	3.4%
<u>Medicaid</u>					
SNF	630	638	648	651	0.3%
ICF	749	758	762	769	0.2%
Home Health	331	485	884	1,579	12.8%
ICF/MR	<u>101</u>	<u>100</u>	<u>102</u>	<u>106</u>	0.4%
Subtotal	1,811	1,981	2,396	3,105	4.2%
<u>Title XX</u>	212	263	383	503	6.9%
Total	3,024	3,490	4,158	5,152	4.2%

Under the base case assumptions, there will be minimal nursing home utilization growth because nursing home supply is assumed to be constant. Thus, nursing home expenditure growth primarily reflects inflation in SNF and ICF costs. Expenditures will grow the fastest for home health care because it will be the primary area of utilization growth. In the area of home health care, Medicare expenses are projected to grow approximately six-fold from about one-half of Medicare LTC expenses to about two-thirds and Medicaid expenses for home health care are projected to grow roughly thirteen-fold. These projections indicate that Medicaid home health expenditures will exceed Medicare home health expenditures in the late 1980's. As we noted in Chapter II, our estimates of Medicaid home health use are overstated somewhat, because the Medicaid home health data used to calibrate our model includes Medicaid

personal care expenditures and recipients in some states such as New York, where personal care expenditures are significant. Consequently, Medicare will probably remain the largest payor of home health services. Nonetheless, Medicaid home health programs will play a much more significant role than they do now. Home health expenditures will remain a relatively small part of total Medicaid expenditures. In 1990, they will constitute only about 7 percent of total Medicaid expenditures.

The growth rates of expenditures are roughly comparable across state Medicaid programs, because it is assumed in the base case that utilization of institutional services will not grow significantly in any states due to Medicaid supply constraints. Consequently, Medicaid expenditure growth primarily reflects cost inflation for Medicaid services and changes in the amounts contributed by recipients through "spend downs".

By contrast, growth rates of average expenditures per recipient will vary significantly across states. Table III-8 presents the average annual rate of change of expenditures per recipient for the nine states with the largest Medicaid LTC expenditures. In 1977 they accounted for 60 percent of national Medicaid LTC expenditures, and in 1990 they are projected to account for 61 percent of the national total. Of these nine states, Michigan, Minnesota, and Illinois had very high rates of growth in expenditures per recipient, because they had very low rates of growth of Medicaid home health supply. Consequently, they had an above average proportion of LTC recipients in nursing homes, whose annual cost per recipient is higher than that for home health recipients. Texas had a very low rate of growth in expenditures per recipient, because its Medicaid home health supply was projected to grow much more rapidly than that of other states.

TABLE III-8

GROWTH OF MEDICAID LTC EXPENDITURES AND MEDICAID LTC EXPENDITURES
PER RECIPIENT IN NINE MAJOR STATES AND THE U.S., 1977-1990

State	LTC Expenditures (\$ millions)			LTC Expenditures Per Recipient		
	1977	1990	Average Annual Rate of Change	1977	1990	Average Annual Rate of Change
California	\$ 428	\$ 2,632	15.0%	\$2,957	\$10,649	10.4%
Illinois	223	1,138	13.4%	2,631	9,880	10.7%
Massachusetts	287	1,578	14.0%	3,452	10,335	8.8%
Michigan	284	1,533	13.8%	4,716	18,242	11.0%
Minnesota	228	1,285	14.2%	4,109	15,407	10.7%
New York	1,360	7,504	14.0%	3,672	8,945	7.1%
Pennsylvania	394	1,459	10.6%	3,030	6,677	6.3%
Texas	362	1,751	12.9%	3,626	6,050	4.0%
Wisconsin	269	1,597	14.7%	3,142	8,657	8.1%
United States	\$6,421	\$33,649	13.6%	\$3,499	\$ 8,503	7.1%

Finally, the Long-Term Care Model uses Bureau of Economic Analysis projections of per capita income in each state to project changes in the share of Medicaid expenditures that will be paid by the federal government. Table III-6 shows that the federal shares will drop slightly from 56 percent to 55 percent nationally. However, in some states more significant drops in the federal share accelerate state expenditure growth rates for Medicaid. States that are projected to have very high growth rates for their Medicaid outlays include Louisiana and Texas. State Medicaid expenditures in these states are projected to grow at 16.6 percent and 14.6 percent per year. In these states, the state share of Medicaid expenditures are projected to grow from 27.59 percent to 36.02 percent, and 36.41 percent to 44.04 percent, respectively because their average per capita incomes are projected to grow significantly faster than the national average.

2. Recipients

In the base case projection, the number of Medicare, Medicaid, and Title XX long-term care recipients are projected to grow much more slowly than expenditures. Table III-7 shows that the total number of recipients will grow at a 4.2 percent average annual rate. The number of Title XX recipients are projected to grow fastest, at 6.9 percent per year. However, the number of recipients will still be dominated by Medicaid.

As with expenditures, home health services will see the greatest growth in the number of recipients. The base case projects that Medicare home health recipient numbers will almost double between 1977 and 1990, and that Medicaid home health recipient numbers will increase almost five fold. In the late 1980's, Medicaid home health recipients are projected to become comparable in size to those of Medicare. Table III-9 shows the rate of growth of LTC recipients for the nine states with the largest Medicaid LTC expenditures. Illinois, Michigan, and Minnesota had the lowest rates because they had the least growth in home health supply, and hence the lowest rates of growth of home health recipients. Texas had the highest rate of growth, because it had a very rapid growth of Medicaid home health supply.

3. Inappropriate Placement

The Long-Term Care Model projections also provide some indication of the longer term effects of the inappropriate placement trends noted in Section C of this chapter. The tables in Appendix E show the base case projections of demand and supply of LTC services under the Medicare and Medicaid programs. These tables show that as Medicaid ICF demand grows and ICF supply does not, there are fewer ICF beds available for persons unable to obtain home health

TABLE III-9

GROWTH OF THE NUMBER OF MEDICAID LTC RECIPIENTS
IN NINE MAJOR STATES AND THE U.S., 1977-1990

State	LTC Recipients (000)		Average Annual Rate of Change
	1977	1990	
California	145	247	4.2%
Illinois	85	115	2.4%
Massachusetts	83	153	4.8%
Michigan	60	84	2.6%
Minnesota	55	83	3.2%
New York	370	839	6.5%
Pennsylvania	130	218	4.1%
Texas	100	289	8.5%
Wisconsin	86	184	6.0%
United States	1,835	3,957	6.1%

care. By 1984, an inadequate supply of Medicaid ICF services for persons needing ICF care eliminates most inappropriate placement of persons needing home health care into ICFs.

Inappropriate use of hospitals increases because the supply of institutional services does not increase to meet increasing demand. As a result, the base case projects that 175,000 more Medicare recipients and 965,000 more Medicaid recipients would be inappropriately placed in hospitals in 1990 than in 1977. The corresponding hospital expenditures would be almost \$300 million for Medicare and over \$1.6 billion for Medicaid in 1990.¹ These estimates show that inappropriate placement in hospitals due to inadequate nursing home supply will be a problem of growing seriousness under current Medicare and Medicaid policies.

¹ These estimates are based upon the hospital cost assumptions described in Section H of Chapter II. Under recent federal legislation, Medicare will only pay SNF rates for administrative care days in hospitals. Regulations implementing this change are being developed at this time.

E. POLICY SIMULATIONS

In order to illustrate the use of the Long-Term Care Model for policy analysis, we ran three simulations which reflect possible Medicaid or Medicare policy changes designed to reduce state and federal expenditures for these programs. Comparisons of the resulting projections with the base case projections give an indication of the potential impacts of budget-cutting policy changes on Medicaid and Medicare.

1. Elimination of Medically Needy Coverage

The first policy simulation estimated expected changes in the Medicaid program which would result from the elimination of Medically Needy programs in states that currently have such programs. Such a change could be made by each state at its option because Medically Needy coverage is not required by the federal government as part of Medicaid regulations. Table III-10 presents a comparison of Medicaid expenditures and recipients from 1981 through 1990 under base case assumptions and the base case modified to eliminate the Medically Needy programs.

Table III-10 indicates that elimination of Medically Needy programs will have the greatest impact on nursing home care. This occurs because persons needing SNF care will on average spend more per year on health care services than other persons. Consequently, such persons are more likely to spend down to Medically Needy income eligibility levels. Table III-10 indicates that if this policy change were enacted in 1981 national Medicaid LTC expenditures would fall about \$1.6 billion. Of this reduction, 64 percent would be realized for SNF care, 14 percent for ICF care, 14 percent for ICF/MR care,

TABLE III-10

COMPARISON OF BASE CASE NATIONAL MEDICAID
EXPENDITURE AND RECIPIENT PROJECTIONS:
CURRENT POLICY VS. ELIMINATE MEDICALLY NEEDY COVERAGE

<u>Medicaid Expenditures</u> (\$ Millions)	<u>Current Policy</u>			<u>Eliminate Medically Needy Coverage</u>		
	<u>1981</u>	<u>1985</u>	<u>1990</u>	<u>1981</u>	<u>1985</u>	<u>1990</u>
o SNF	\$4,565	\$7,625	\$12,753	\$3,566	\$7,282	\$12,784
o ICF	4,523	7,302	12,079	4,307	7,261	12,115
o Home Health	392	877	2,246	331	752	2,027
o ICF/MR	1,763	2,789	4,971	1,534	2,434	5,022
Subtotal	11,243	18,593	32,049	9,738	17,729	31,948
Hospital	92	31	1,600	31	128	1,363
Total	\$11,335	\$18,824	\$33,649	\$9,769	\$17,857	\$33,311
<u>Medicaid Recipients</u> (Thousands)						
o SNF	640	648	651	529	612	651
o ICF	763	762	769	714	750	767
o Home Health	551	884	1,579	488	785	1,457
o ICF/MR	101	102	106	84	89	105
Subtotal	2,055	2,396	3,105	1,814	2,235	2,980
Hospital	121	216	991	48	129	851
Total	2,176	2,612	4,096	1,862	2,364	3,831

and only 4 percent for home health care. In addition 4 percent of the cost reduction would be achieved through lower hospital expenditures for persons waiting to be placed in LTC facilities. These expenditure reductions would be associated with a reduction of approximately 314,000 recipients. About one-third of this reduction would consist of SNF recipients. The remainder would primarily be ICF, home health and hospital recipients in about equal proportion. Only about 6 percent of all ICF/MR recipients would be affected because most are categorically needy.

By 1990, the effect of the change in Medicaid policy would be significantly less. This occurs because SNF and ICF beds that would have been used by Medically Needy recipients would be freed for use by categorically needy persons who otherwise would have been unable to obtain care. Similarly, freed home health supply would be used by categorically needy persons who would have been unable to obtain home health services. The policy simulation run indicates that by 1990, annual Medicaid savings would be cut to \$338 million and the reduction in LTC recipients fall to 265,000 persons. Most of this reduction occurs among home health care recipients. An interesting impact of this policy change is that Medicaid SNF, ICF, and ICF/MR expenditures would be slightly higher under the policy change in 1990. This occurs because the Medically Needy contribute more towards their LTC costs than the categorically needy. Consequently in some states, the average cost to Medicaid programs of treating the medically needy is lower than the cost of treating the categorically needy.

The above results might overestimate the impact of eliminating Medically Needy coverage, because our base case projections use conservative (very low) estimates of unmet Medicaid demand. If there were more categorically persons unable to receive LTC services because of inadequate supply than we had estimated, then a greater portion of LTC services freed up by Medically Needy persons would be used by the Categorically Needy. This would result in lower expenditure and recipient reductions than those presented here.

2. Increasing Medicare SNF Copayments

Two policy simulations were also conducted to assess the potential effect of increasing SNF coinsurance requirements on Medicare program costs. Currently coinsurance payments are required for each SNF day after the

twentieth day. One policy option tested would increase the SNF coinsurance rate by 20 percent. The second option tested would apply existing coinsurance rates to the first through twentieth days of a SNF stay as well as all subsequent covered days. In our analysis, we did not try to estimate the possible reduction in SNF utilization that might occur as a result of coinsurance changes. The magnitude of this effect is reduced by the fact that there are more persons seeking SNF care than are able to obtain it because of Medicare SNF supply constraints. Consequently, reductions in utilization of SNF care by persons currently receiving care would be replaced in part by additional utilization by new recipients.

Table III-11 shows that the 20 percent increase in coinsurance would have a relatively small effect on Medicare LTC costs. In 1981, Medicare costs would be reduced by about \$20 million. This would grow to \$60 million by 1990. The projections in Table III-9 show that Medicare outlays would be reduced much more under the second coinsurance option. Medicare LTC costs would be reduced by \$130 million in 1981 and by \$410 million in 1990. However, the net reduction in cost to the federal government would be less than the amounts shown in Table III-11, because increased coinsurance payments for persons eligible for both Medicaid and Medicare would be paid for by Medicaid. The Long-Term Care Model estimates that roughly 15 percent of all Medicare recipients are also eligible for Medicaid in 1981 and that this proportion will rise to around 40 percent by 1990. On average, the federal government pays about 55 percent of Medicaid cost nationally. Therefore, we estimate that the net savings to the federal government of the increase in coinsurance rates would be 8 to 20 percent lower than reductions shown in

TABLE III-11

COMPARISON OF BASE CASE MEDICARE PROJECTIONS UNDER
CURRENT POLICY AND TWO POLICIES TO INCREASE SNF COINSURANCE a/

<u>Policy</u>	<u>National Medicare LTC Expenditures, By Year</u> (\$ Billions)		
	<u>1981</u>	<u>1985</u>	<u>1990</u>
Current Policy	1.15	1.80	3.19
Increase SNF Coinsurance by 20%	1.13	1.77	3.13
Extend SNF Coinsurance to 1-20 days	1.02	1.58	2.78

a/ Includes hospital expenditures for persons waiting in hospitals to be placed in SNFs.

Table III-1. Similarly, it should be noted that policies which increase Medicare coinsurance payments will shift some Medicare costs to the states in the form of their share of Medicaid costs.

F. IMPLICATIONS FOR COST CONTAINMENT STRATEGIES

Our findings from the projections described in this chapter have several implications for long run federal and state strategies for containing LTC costs.

First, our projections indicate that federal strategies need to focus primarily upon containing Medicaid LTC costs because Medicaid currently accounts for 10 times as much LTC expenditure as Medicare and this ratio is projected to increase. Taking into account the fact that much of so-called Medicare LTC costs are for post-hospital recovery care rather than long-term care, the ratio is still larger. Another consideration which supports this conclusion is that Medicaid generally supplements Medicare LTC benefits. Consequently, many cuts in Medicare expenditures will increase Medicaid LTC expenditures.

Second, tightening Medicaid eligibility requirements will only reduce Medicaid LTC expenditures in the short run. The LTC Model projects that there will be a growing number of persons who are eligible for Medicaid nursing home benefits who will be unable to obtain them because of an inadequate supply of these services. Nursing home expenditures, which comprise most of Medicaid LTC expenditures, will primarily be constrained by SNF and ICF supply to Medicaid recipients. Consequently, any tightening of eligibility rules will, in the long run, only reduce the number of eligible persons unable to obtain nursing home care, rather than reduce Medicaid nursing home utilization or costs.

Third, introduction of coverage of additional non-institutional LTC services is likely to increase Medicaid LTC costs in the long run. Addition of these services would certainly improve the ability of Medicaid programs to meet the LTC needs of persons they cover. However, the LTC model indicates that such additions would primarily add more recipients and expenditures in the future. As we noted in Section D of this chapter, inappropriate placement of persons needing non-institutional care into ICFs is projected to become negligible by the mid-1980's under base case assumptions. This finding implies that addition of non-institutional LTC benefits would primarily increase the number of Medicaid recipients and expenditures rather than reduce future misplacement into nursing homes.

Increased recipient cost sharing cannot be used to significantly reduce Medicaid nursing home costs because Medicaid nursing home residents already spend nearly all their resources on their care. Therefore, it seems that much broader strategies have to be developed in order to contain Medicaid LTC costs

than the ones discussed above. One strategy that needs to be studied is the use of incentives to encourage greater availability of informal support services. If there were more informal support available to persons needing LTC, need for LTC services would decline, and it might be possible to reduce total LTC program costs in the long run. This seems to be a basic, and possibly essential, step towards reducing public LTC expenditures equitably.

CHAPTER IV

AREAS FOR FUTURE RESEARCH

The Long-Term Care Model is designed as a tool for analyzing many issues related to federal and state long-term care policy. Potential areas for future research using the Model fall into two categories -- applications of the Model, and model refinement using better data as it becomes available. These two cases are discussed in this chapter.

A. POTENTIAL APPLICATIONS

The Long-Term Care Model can be used to analyze many long-term care issues, including:

- estimating the need for long-term care services
- assessing the extent of inappropriate use of long-term care services under Medicare and Medicaid
- forecasting future federal and state expenditures for long-term care services under Medicare and Medicaid
- analyzing the impacts of changes in Medicare or Medicaid eligibility criteria
- analyzing the impacts of changing the services covered by Medicare or Medicaid.

The LTC Model will be extremely useful for the above applications, because it is the only model that integrates state-by-state demographic projections, state and federal LTC program characteristics, and provider characteristics into a single logical framework. Areas of potential analysis are discussed below in greater detail.

1. Estimating the Need for Long-Term Care

The Needs Module of the LTC Model provides the only currently available estimates of the need for long-term care by age and sex. These provide estimates of the number of people needing both institutional and non-institutional care.

The need estimates can be used for several purposes:

- providing estimates of the unmet need for long-term care services
- providing estimates of the number of people likely to seek federal long-term care if service coverage were extended
- studying the changing needs for long-term care as the population ages
- state or regional planning for long-term care facilities and services.

For several of these applications, the needs estimates could be simply applied to the population of interest without use of the remainder of the model. No changes or reprogramming of the model would be necessary in order to study the expected need of a population for long-term care services.

2. Assessing the Extent of Inappropriate Placement

As we illustrated in Chapter III, the LTC Model can be used to provide estimates of the magnitude of misplacement in long-term care facilities. The data are not adequate to estimate the actual amount of misplacement, but they can be used to project changes in future misplacement patterns.

In order to estimate the amount of misplacement, the number of people demanding each service is compared to the number receiving each service. Where excess demand is indicated by more demand than supply, placement at a higher level than needed may occur. The amount of excess demand over supply determines the magnitude of misplacement occurring in the Model.

The amount of misplacement in hospitals is indicated directly in LTC Model reports. This indicates the number of people waiting in hospitals because of an inadequate supply of nursing home services.

The cost of misplacement to the federal government can be estimated by applying the proportion of recipients who are misplaced to cost figures appearing from the model. This analysis can be done with no changes to Model inputs or programs.

3. Developing Medicare and Medicaid Forecasts

The Long-Term Care Model was designed to provide forecasts of future Medicare and Medicaid expenditures, utilization, and the number of recipients of long-term care by type of service. Advantages of using this model for estimates are that it takes into account explicitly all the major factors that affect these forecasts including:

- projected changes in the age and sex composition of the populations in each state;
- differences in eligibility requirements in different states
- supply constraints on the number of persons who can receive LTC services under federal programs and on the corresponding quantity of services that can be provided under Medicare; and
- changes in placement of individuals in long-term care facilities that will occur as the relationships between demand and supply change over time.

Because the model accounts for these factors, model forecasts are more appropriate for use than simple extrapolation of historical Medicare and Medicaid data.

Several improvements can be made to the base case projections described in this report as new data become available. Currently, the LTC Model is calibrated with the latest data that was available at the time of its develop-

ment. This data primarily consisted of program data for fiscal years 1977 through 1979. As subsequent data becomes available, it would be useful to compare base case Model projections with actual data to determine whether any subsequent changes in Medicaid or Medicare LTC programs will necessitate modifications in the Model's calibration. One area where this might arise is in the area of Medicaid nursing home reimbursement. Subsequent to 1979, some states have modified their nursing home reimbursement procedures for Medicaid recipients. As data becomes available on average Medicaid payments per day, it will be possible to determine whether these changes will necessitate changing Model parameters on the average payments per day to providers of Medicaid SNF and ICF care.

Because of recent changes in federal legislation, there will be changes in state Medicaid programs in the next few years. The Omnibus Budget Reconciliation Acts of 1980 and 1981 have changed the share of Medicaid expenditures that will be paid by the federal government and permitted states broader discretion in setting Medicaid policies. These changes will have to be incorporated within the LTC Model once data on the effect of these changes becomes available. In addition, the 1981 Omnibus Budget Reconciliation Act changes the level of Medicare reimbursement for persons in a hospital awaiting placement in an SNF. Under the new law, such stays will be reimbursed at SNF rates. After regulations implementing this change have been written, it will be possible to revise our estimates of the costs of such hospital stays.

Finally, it will be possible to improve upon LTC Model demographic projections and supply assumptions in states where better data is available. These improvements would be most appropriate for more detailed studies of specific states.

4. Analyzing the Impacts of Medicare and Medicaid Program Changes

The Long-Term Care Model can also be used to analyze the effect of Medicare or Medicaid program changes on long-term care expenditures, utilization, and recipients. Policy changes that can be analyzed include:

- state or federal changes in covered services. The effects of changes in coverage of services can be predicted simply by changing the file which specifies covered services by state and running the Model to forecast changes in expenditures. In order to forecast the effects of adding covered services, additional assumptions must be made as to the expected utilization, supply and cost for added services. Once such assumptions are made, the Model can be used to forecast changes in expenditures.
- state or federal changes in the population covered by Medicaid. Chapter III illustrated the use of the Model to forecast changes in expenditures caused by eliminating long-term care coverage under medically needy programs. The effects of other cutbacks or additions to the population served could be forecast by changing eligibility requirements in the Model.
- elimination of the three day prior hospital stay requirement for Medicare SNF services. The Model can predict the effect of such a change on program expenditures. This is done by making a slight change in the model programming of the Eligibility Module so that individuals needing SNF services are not screened for a prior hospital stay.
- changes in reimbursement policy. The effects of changes in federal or state reimbursement policy could be forecast by changing the assumptions used in the Expense Module of the model. Changes in the levels of costs or the rate of increase of reimbursement could be made by changing the cost input file to reflect desired new patterns of reimbursement. Estimates of corresponding changes in the supply of LTC services would also have to be entered in the Supply Module.

B. MODEL LIMITATIONS AND POSSIBLE REFINEMENTS

The accuracy of the Long-Term Care Model is necessarily limited by the quality of the data used to develop it. ICF used the best data available on the Medicare, Medicaid, and Title XX programs. Nonetheless, assumptions had

to be developed in several areas where available data were inadequate for our analysis. This section identifies several model limitations where more research or better data are needed in order to improve the general understanding of federal and state long-term care programs and refine the LTC Model. These areas are described below.

1. The Need Module

The Need Module estimates the need for long-term care services in the general population by developing need rates that reflect the proportion of the population in different age-and-sex groupings that needed long-term care services in 1977. These rates were developed by applying a needs assessment scoring system to the characteristics of people in each grouping, as determined from three social surveys--the Health Interview Survey, the National Nursing Home Survey, and the Survey of Institutionalized Persons. Because these surveys only indicate people's condition at one point in time, the need rates developed also only reflect need at one point in time. The resulting need estimates had to be adjusted upward to estimate the number of people needing long-term care at any time during a year. There were not suitable data available that could be used to adjust this data directly. Instead, a rough adjustment factor was estimated by comparing the number of Medicare and Medicaid recipients with our initial estimates of need. Additional research needs to be conducted to determine how long-term care needs change over a one year period. This can be accomplished by applying the Modified Geriatric Functional Rating Scale to time series data on the impairment and social support characteristics of a sample of the general population. If such data becomes available, then a better adjustment factor for our need estimates can be developed.

2. Eligibility Module

Currently there are no data available on the total number of persons who are eligible for and seek Medicare or Medicaid LTC services in each state. This number is generally greater than the number of LTC service recipients because some are unable to obtain care due to supply constraints. As a result, we had no means of directly checking the validity of our estimates of the number of persons seeking LTC services under these programs. Instead, we checked that our recipient forecasts were consistent with historical recipient data. Additional research to estimate the extent of unmet demand for LTC services under Medicare and Medicaid would be useful to better evaluate the potential impacts of changes in LTC supply on usage. Such data would have to be collected on a state by state basis through a survey of persons receiving Medicare and Medicaid benefits. If such data do become available, then we will be able to improve the calibration of the LTC demand estimates in the Model. If such data becomes available for only some states, the Model could be recalibrated for those states.

Another limitation of the Eligibility Module is that it only screens persons needing LTC services for age, income, and type of service needed. The model does not explicitly screen for other requirements such as assets or specific disability eligibility criteria. Incorporation of additional eligibility screens into the Eligibility Module can be accomplished in cases where the applicable population characteristics are included in the three social surveys used in the Model. If they are not, then they will have to be added by matching the three surveys with results from other surveys. However, this process should be done only to meet the specific analysis needs because it is likely to be a relatively complex task.

3. Demand Module

An inherent limitation in the Long-Term Care Model is the fact that each state Medicaid program defines the need for long-term care services differently. For example, in Oklahoma, most persons needing institutional care are determined to need ICF care. In other states, many of these individuals would be considered to need SNF care. We tried to capture these differences in the Model by using demand adjustment rates that reflect differences in the mix of services provided in different states. Refined estimates for specific states can be developed using the LTC Model by reviewing the specific needs assessment criteria used by these states. These refinements can be made where detailed analyses of specific states are desired.

4. Supply Module

In the Supply Module, LTC supply is an exogenous input. It would be desirable to model how supply of LTC services was likely to vary across states and over time. Appendix D summarizes our attempt to do so using econometric analysis. In this analysis, we found that there was inadequate data to adequately capture the effect of a key variable, average reimbursement per unit of service (i.e., per day or per visit). Therefore, econometric equations were not used. Development of such equations would greatly enhance the forecasting ability of the LTC Model. However, data on average costs and revenues per unit of service for Medicare and Medicaid providers are needed to estimate the equations properly. This data is not currently available. Collection of average costs and revenues for Medicare and Medicaid services would also improve the outputs of the Expense Module. These values had to be estimated indirectly using program data as explained in Chapter II.

5. Expense Module

A limitation of the LTC Model is that it is unable to capture the behavior of some states that delay incurring Medicaid expenditures so that they appear in a subsequent fiscal year. Some states use this practice to keep within their fiscal year Medicaid budgets. The LTC Model does not try to forecast when such behavior might occur. Such analysis would be best conducted by persons familiar with individual state Medicaid programs using the LTC Model's projections.

6. Title XX

States are required to report expenditures and recipients by service for Title XX. However, they do not provide information on utilization. Therefore, Title XX had to be modelled differently from the other two programs. It is unlikely that additional data will become available for Title XX.

7. General Medicaid Reporting Problems

The LTC Model makes extensive use of Medicaid data in most of its modules. Many states do not consistently report complete Medicaid data on expenditures, utilization, and recipients by services. Therefore, for many states we had incomplete data on supply, utilization rates, and recipients. Data problems were sometimes solved by phone calls to state Medicaid agencies or by making estimates based on other year's data. The most severe problem was with data on ICF/MR recipients and expenditures. In this case, we did not estimate expenditures for states which did not report data on ICF/MR expenditures and utilization. In addition, many states combined data on personal care services with data on home health services. This results in an overstatement of Medicaid home health use and expenditures.

Better state reporting is needed for Medicaid program data than is currently being collected. If more accurate and more complete data is produced in the future, then it will be feasible to develop more reliable projections for the LTC Model.

APPENDIX A

METHODOLOGY FOR DEVELOPING NEEDS ESTIMATES

APPENDIX A

METHODOLOGY FOR DEVELOPING NEEDS ESTIMATES

A. INTRODUCTION

Estimates of the number of people needing each of seven types of long-term care are necessary for the Need Module of the LTC Model. This Module must determine the number of people seeking long-term care in the following categories:

- skilled nursing facilities,
- intermediate care facilities,
- home health care,
- residential treatment centers,
- personal care home services,
- homemaker services,
- rehabilitation services.

This Appendix reviews possible methodologies to generate need estimates and proposes the use of different levels of services based on available information.

In choosing a methodology, two criteria should be considered:

- availability and data needs of methodology - The methodology to generate estimates of the need for long-term care should be relatively available and in a form which can be applied to the three data sources proposed in the memorandum of August 4, 1980, the Health Interview Survey (HIS), the National Nursing Home Survey (NNHS), and the Survey of Institutionalized Persons (SIP). This means placement techniques cannot be based upon variables which our data does not include, or for which appropriate substitutes are available. Attachment A lists the information which is common to all three surveys.

- methodology must reflect appropriate placement patterns - Many studies have shown that large numbers of people are placed at inappropriate levels of care. Therefore, our sources should not reflect current patterns of placement, but should reflect ideal patterns of placement. We want information on where people should be placed and not on where they are placed.

Based upon our review, it is proposed in this memo that two scoring scales be used to generate estimates for need--the Geriatric Functional Rating Scale, and the Oregon risk assessment questionnaire. These scales were chosen because they:

- have been used and tested on patient populations seeking long-term care placement,
- reflect the appropriate placement decisions of independent evaluators as closely as possible,
- use variables which are contained in our data set, or for which acceptable substitutes are available,
- are considered to be reliable and objective placement methods by long-term care practitioners.

The remainder of this memo will review methodologies which were considered, as well as provide background information on the area of patient assessment of need for long-term care. The final sections will consider available methodologies in greater detail and outline the modifications necessary for use in our model.

B. FACTORS IN PATIENT ASSESSMENT

There are several methods of assessment used to choose the proper setting for the long-term care patient. This section outlines important factors in the determination of patient placement, as well as the various scales devised to measure these factors.

Several factors have been identified as important in the placement of patients in need of long-term care. Among these are:

- availability of social and financial resources - including the presence or absence of a spouse, children or friends willing to care for a person in the home, the availability of community resources needed to maintain a person in the home, and the presence of financial resources needed to live comfortably in the presence of disease or disability.

- functional status - the ability to care for oneself and perform functions necessary for everyday life such as bathing, eating, cooking meals, walking, doing housework, dressing, etc.
- physical status - the need for health services from a physician, nurse and home health worker because of illness or disability.
- mental status - confusion or disorientation resulting from aging or disease which may result in an inability to function properly.

A summary of these factors is found in Table 1. Most common predictors of institutionalization are the patient's present living situation and the functional status of the patients as measured by the Katz Activities of Daily Living, explained below. Studies of the risk of institutionalization have shown that white females with no informal support system in their present living situation (no children, spouse or friends living with them) are more likely to be institutionalized one or more times in their lifetime.

Once identified, an attempt is made to measure the importance of various factors for institutional placement. Many scales have been developed to measure these factors. Examples of several scales of well being are:

- The Index of Independence in the Activities of Daily Living (Index of ADL) - This index measures a person's need for assistance in performing those activities done habitually in the course of daily living. The activities measured are; dependence in bathing, dressing, using the toilet, mobility, continence and eating. The Index is related to a person's need for assistance, and the order of the Index is related to the level of assistance necessary. Because of these characteristics, the Index is useful in long-term case placement decisions.
- Guttman Scale (Rosow functional scale) - This scale was developed by Rosow and Breslau to measure the functional ability of the aged. The scale is based on interview questions designed to test the ability of a person to leave the home, go up and down stairs, walk, do heavy work, and carry out "normal" activities. Responses to questions indicates a level of functional ability which is numerically specified.
- Instrumental Activities of Daily Living - This scale was developed to measure the ability of the aged to carry out activities necessary to remain independent in the home. The

Table 1

Summary of Important Variables in Patient Placement

Author	Important Variables in the Placement of LTC Patients				
	Social and Financial Resources	Functional Status	Physical Status	Mental Status	Other
Studies of Predictors of Institutional Placement ^{1/}					
Sherwood/Morris/Barnhart	Receipt of community services, marital status, present living situation, ^{2/} financial independence, lifestyle/peer relationships family occupation	Katz ADL score Rosow scale	Perception of health	Kastenbaum orientation scale	
Martin Orr		Walking, dressing	Need for nursing care	Confusion behavior scale	
Parker/Boyd ^{3/} (discriminant)	Presenting living situation	Dressing ^{4/}			
Parker/Boyd (clustering)	Presenting living situation	Dressing, ^{4/} communication, mobility			
Moelker/Bechman	Informal support system ^{5/} present living situation	Functional ability	Need for medical care	Self-endangering mental condition	Desire of patient for living arrangement
Studies of Risk of Institutionalization					
Allison-Cooke/Thornberry	Marital status, present living situation, number of children				Race, education, sex, income
Vicente/Wiley/Carrington	Marital status, present living situation				Sex, race, income, age
Palmore	Present living situation, finances marital status, number of children				Sex, education, race

1/ Sources are found at the end of the memorandum.

2/ Includes number of rooms for own use, and number of people sharing a bathroom.

3/ The Parker/Boyd study compares the use of two techniques of placement with different results.

4/ These were the most important variables out of 60 tried for use in the discriminant equation.

5/ A breakdown in client's informal support system includes the death of an informal caregiver or client behavior which estranged the informal caregivers.

activities measured are telephoning, transportation, shopping, handywork, housework, cooking, laundry, taking medication, and money management.

- Short Portable Mental Status Questionnaire (MSQ) -- The MSQ was developed to measure the alertness of the aged. Persons are given a numerical score based upon correct answers to a set of ten questions concerning well known facts. The questions ask such things as date, day of the week, President's name, and simple mathematical computations. Scores are based on the number of right answers.
- Morale Scale -- This scale was developed to measure the morale, or depression level of the elderly. It is concerned with a person's ability to adjust to aging and provides a measurement of loneliness and social contact of the elderly person. Answers to the twelve questions result in a morale score used for patient assessment.

Copies of scale questionnaires are included in Attachment A-2.

Most widely used in the Index of ADL which is the basis for questions concerning functional behavior on the NNHS, SIP, and the supplemental questions on the 1977 HIS. There have been many other scales developed for patient assessment questionnaires which are used in demonstration projects or for placement in the appropriate nursing home setting.

C. METHODS OF PATIENT ASSESSMENT

There are several methods of assessment used to choose a proper setting for the long-term care patient. This section will briefly review these methods and their use in determining the need for various levels of care. The three types of assessment methods are:

- Physician Assessment. Patients are generally placed at a certain level of nursing home care on the recommendation of their physician. Physicians place patients in nursing homes based upon their medical need for long-term care. A recent GAO report suggests that physicians often place patients inappropriately because they use a medical definition of need instead of a functional and social definition.^{1/} The high level of inappropriate placement found in several studies led to the acceptance of a multi-disciplinary team assessment. Because the method used by physicians is highly subjective, it is not useful for our model.

^{1/} Government Accounting Office, "Entering a Nursing Home: Implications for Medicaid and the Elderly".

- Multi-Disciplinary Team Assessment. Because of the need to consider factors other than medical factors in patient placement, many nursing homes and demonstration projects are using teams which may include a physician, nurse, social worker, psychologist, physical therapist, or home health worker. These teams assess a patient's need for care in a variety of ways and recommend an appropriate level of care. Assessment criteria is often subjective and may vary according to service availability and team composition. This type of assessment is expensive, but leads to the highest degree of appropriate placement of any method.
- Questionnaire Assessment. Need for care can also be determined by a questionnaire assessment which attempts to replicate decisions made by teams in an objective way. Questionnaires determine a person's functional, mental, and physical status on the basis of patient self-assessment. These questionnaires incorporate several of the measurement scales mentioned above.

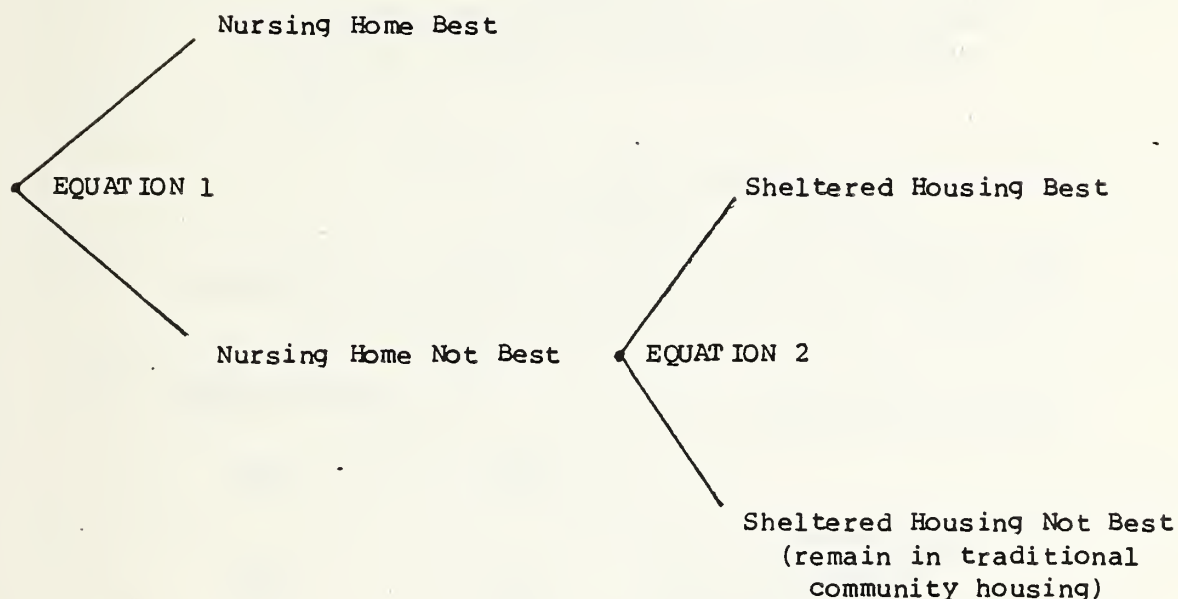
Many questionnaire assessments have been developed for demonstration projects, for program evaluation projects, and for use in nursing homes to coordinate care plans. Most forms provide no rules for placement, but are used as an aid in multidisciplinary team assessments. Those best suited for our needs provide quantitative rules for placement or equations which predict placement. The next section reviews, in greater detail, those studies which meet this need.

D. SUMMARY OF POSSIBLE METHODOLOGIES FOR USE IN LTC MODEL

In this section we consider four methodologies which meet the need for distinct placement criteria. This section evaluates use of these four possibilities in our model with regard to placement levels, data availability, and methodological problems.

1. Sherwood, Morris, Barnhart, "Developing a System for Assigning Individuals into an Appropriate Residential Setting" 1975.

This study is summarized in Figure 1. In this study, applicants to a long-term care institution and a residential setting were screened by a team consisting of physicians, nurses, and social workers to assure placement at an appropriate level of care. These people were subsequently assigned to one of two groups, a development group, used to develop an equation, or a validation group, used to test an equation. They were then assessed using a written questionnaire. Using the answers to questionnaires of the development group and the setting judged appropriate by the placement team, Sherwood et. al., developed a discriminant equation which assigned people either to a nursing home or not to a nursing home. This equation was tested on the validation group. The same technique was used to assign people to sheltered or

Figure 1Summary of Sherwood, Morris, Barnhard Methodology

	<u>EQUAT ION 1</u>	<u>EQUAT ION 2</u>
<u>Success Rate</u>		
development group	81.9%	82%
validation group	71.7%	82%
<u>Sample Size</u>		
development group	83 persons	89 persons
validation group	<u>53 persons</u>	<u>81 persons</u>
Total	136 persons	170 persons

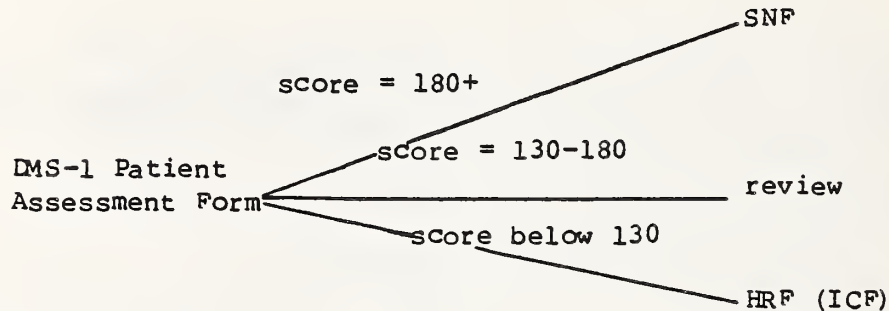
independent housing. The results of the discriminant equation were the same as the team results in 71% of the cases for the nursing home group and in 73% of the cases for the sheltered housing group. This type of study is useful because it can be applied to a larger population and reflects appropriate placement patterns. However, these equations include variables which are not included in our Data set. Included in Attachment A-3 is a table which summarizes the variables used in the Sherwood equations and indicates the availability of data or acceptance substitutes.

2. Martin Orr, New York State

This methodology is summarized in Figure 2. Residents of nursing

Figure 2

Summary of New York State Placement Methodology



	<u>HRF</u>	<u>SNF</u>
<u>Success Rate</u>		
Development group	76%	79%
Validation group	72%	77%
<u>Sample Size</u>		
Development group	1,236 persons	5,982 persons
Validation group	137 persons	664 persons

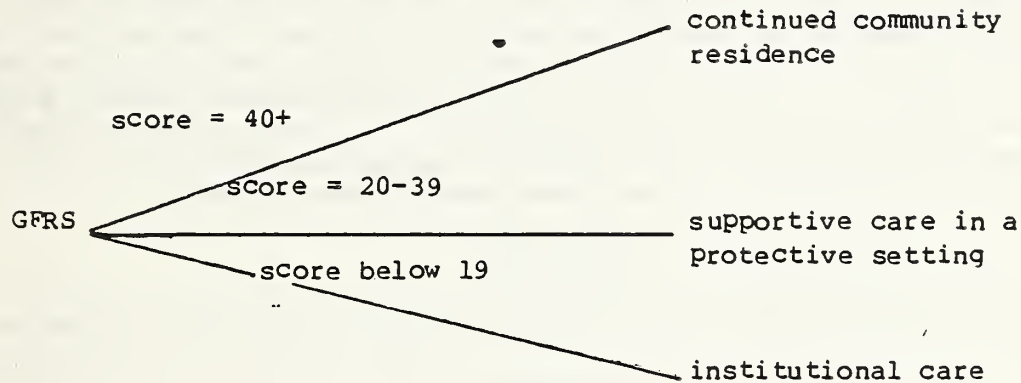
homes in New York State were assessed using the DMS-1 Patient Assessment Form. The questionnaires of 8,019 patients were used to develop a discriminant equation which would be used to place and screen new applicants to institutional care. The equations were then tested on a validation sample of people. New York currently uses the questionnaire and a version of this equation to place patients at the appropriate level of care. The equation predicted placement in 79% of the cases for the skilled nursing level and in 76% for the intermediate care level in the development group. In the validation group, the equations had a success rate of 72% for the intermediate care level and 77% for skilled nursing facilities. Orr found that the most important predictor variables were the need for skilled nursing observation and assessment, independent living variables, and behavioral variables (such as alertness, abusive or regressive behavior). The Orr methodology tried to predict actual placement in New York - rather than appropriate placement. In addition, the questionnaire includes variables for which we have no data. Data used in the DMS-1 Form and indicates the availability of data or acceptable substitutes is summarized in a table in Attachment C.

3. Geriatric Functional Rating Scale (GFRS)

The GFRS is summarized in Figure 3. The GFRS was developed by

Figure 3

Summary of Geriatric Functional Rating Scale



	<u>Home</u>	<u>Residential</u>	<u>Institutional</u>
<u>Success Rate</u> ^{1/}			
Grauer and Birnbom	90%	41%	60%
Noelker and Bechman	65%	--%	64%
<u>Sample Size</u>			
Grauer and Birnbom	49 persons	35 persons	46 persons
Noelker and Bechman	67 persons	--	48 persons

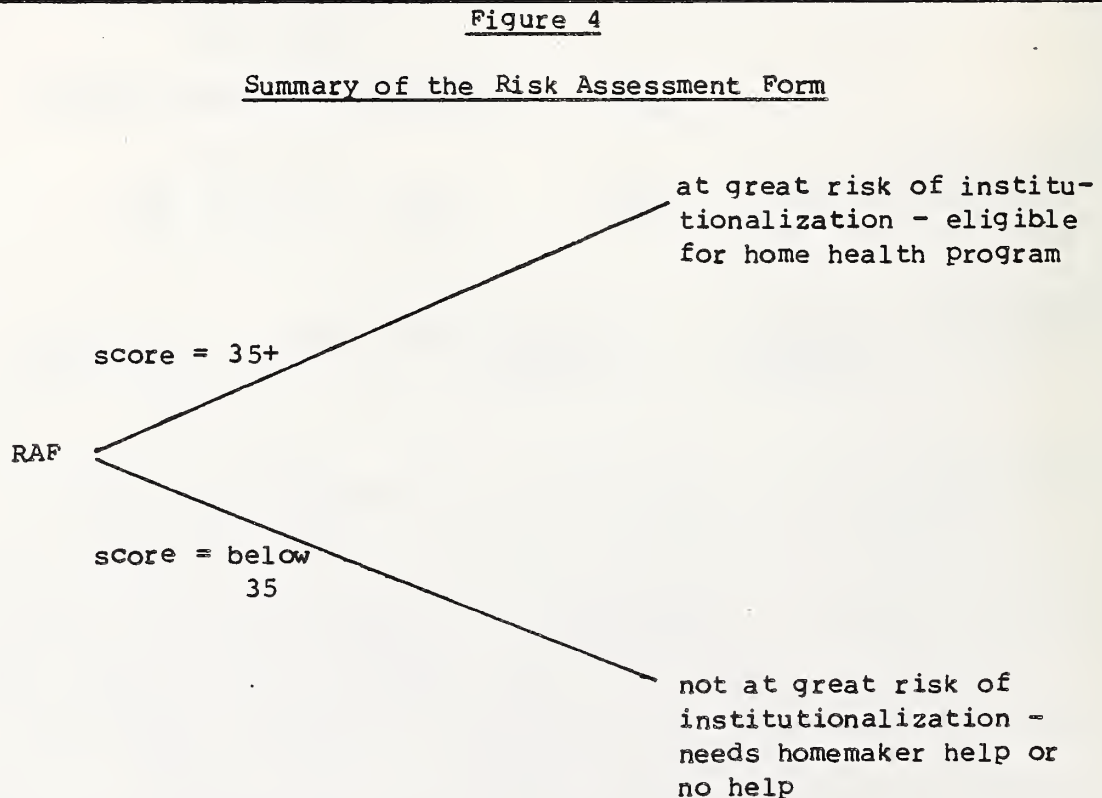
^{1/} The success rate here refers to the predictive validity.

practitioners in Montreal and tested on three groups of individuals, the first from the community, the second from a day-care facility, and the third from a long-term care institution. These groups of people had been originally placed by a team and were then assessed using the GFRS, with a high degree of success, especially for the institutional group, and the group to remain in the community. The GFRS was further tested by practitioners at the Benjamin Rose Institute in Cleveland, Ohio. Patient placement was evaluated simultaneously by a team of social workers and by the GFRS. The success rate, measured in terms of the instrument's

ability to predict placement level, was lower in Cleveland than in the original study, but was still proven to be a useful tool for patient placement. It is the only known tool which distinguishes between the need for institutional and non-institutional care. The GFRS places individuals according to scores based on answers to questions about physical health, functional capacity, mental status, community resources, finance and living situation. However, the Noelker and Bechman article shows that the effect of physical health, functional capacity and mental status are the most important variables to be considered. Data included in the GFRS survey as well as indications of availability or substitutes are summarized in a table included in the Attachment. Information on community resources and living situation are also included on the form. However, at the suggestion of Noelker, some of these variables are not considered here because of the small amount of predictive power they lend. The GFRS is thought to be highly predictive for institutional groups and for the group that should remain in the community. It is also believed that the GFRS will be more effective for predicting placement patterns of a large population, as opposed to placement location of an individual.

4. Oregon Risk Assessment Form (RAF)

Figure 4 summarizes the function of the RAF. It is used to separate



Success rate - 97% when results of assessment form were compared with decisions of independent evaluator.

patients at high risk of institutionalization (in need of health, medical or therapy services) from those at low risk. When checked by an independent evaluator, this instrument was shown to be effective 97% of the time. The score is based on only 12 items, but the form includes many more items used for informational purposes. Table 4, included in Attachment C, summarizes data necessary for the RAF form and indicates availability of variables or substitutes.

F. RECOMMENDATIONS FOR LTC MODEL

Based upon the review of possible methodologies of determining the need for long-term care, it is recommended that the GFRS and RAF be used in order to distinguish between four levels of care. These methods were chosen for the following reasons:

- The GFRS is the only objective tool which distinguishes between those in need of institutional care, and those in need of non-institutional care.
- The RAF is the only objective tool found which distinguishes among levels of non-institutional care.
- Both surveys can be modified to include variables for which we have data. These modifications can be made while maintaining the basic structure and content of the questionnaires.
- These surveys provide objective rules which can be used within the structure of a computer model.

Use of the tools will provide estimates of need for the following levels of care:

- institutional care,
- supportive care in a residential setting (personal care services),
- home health care,
- homemaker services.

It is also recommended that further analysis be undertaken to divide the population into groups as shown in Figure 5. These groups consist of people needing:

- skilled nursing facility
- intermediate care facility,
- personal care services,
- home health care,

- homemaker services,
- no long-term care.

Further analysis, however, should be done after first testing the use of the two recommended assessment methods on the actual data to be used. Because of data limitations, modifications must be made in order to use the GFRS and RAF. Modified forms are followed by original forms to illustrate necessary changes.

In the GFRS, the major change made was the substitution of the Index of Activities of Daily Living (Index of ADL) for the Instrumental Activities of Daily Living (Instrumental ADL) at the appropriate levels. This change was considered appropriate by Linda Noelker, one of the researchers who tested the GFRS. Both the scales are measures of functional ability. Because of the characteristics of the Katz Index of ADL, described earlier, it should not decrease the predictive power of the GFRS, and there is theoretical reason to believe it will improve it.^{1/}

Second, changes were made in the mental status section of the questionnaire. Because of the limited number of questions in the HIS, NNHS and SIP on symptoms of mental illness or aging (such as delusions, hallucinations, memory loss), the medical diagnosis was substituted as an available measure of need. The significance of this change is predicted to be low. It could lead to an underestimate of the number of people needing long-term care for reasons of senility and mental illness, because care is often needed for symptoms of mental illness, as well as diagnosed mental illness.

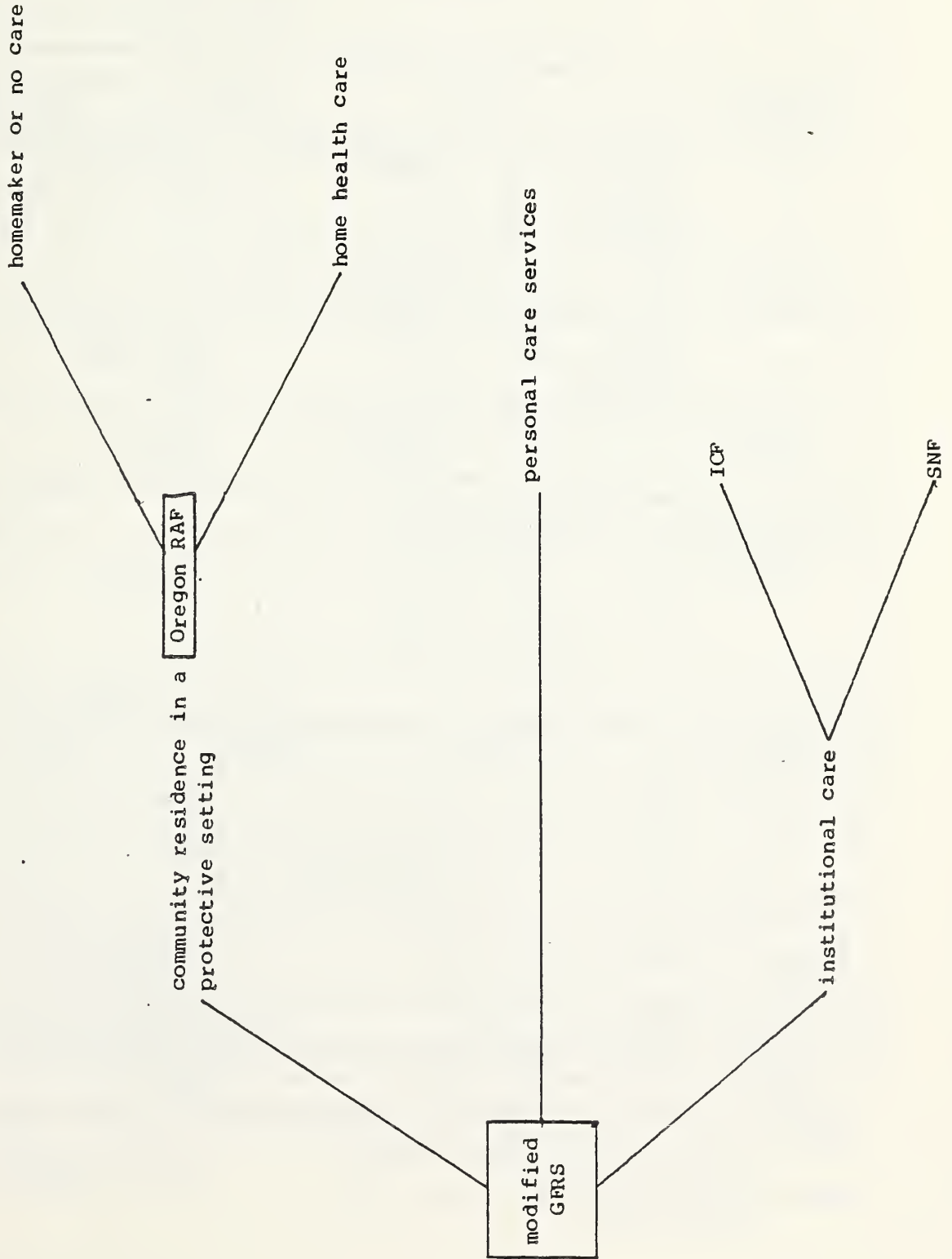
Similar changes were made in the RAF Questionnaire, with the major change being the substitution of the Index of ADL for the Instrumental ADL.

These modifications will be checked using a small sample of data from our surveys when it becomes available. It is possible that minor modifications will be made in light of what is known about factors affecting patient placement. However, it is felt that this methodology is the best available which meets the requirements of our model within the constraints of available data.

^{1/} Katz, Sidney et al. in "Progress in the Development of the Index of ADL" Gerontologist, 1970 and "Long Term Course of 147 Patients with Fracture of the Hip" Surgery, Gynecology, Obstetrics, June 1967.

Figure 5

Summary of the Proposal for the Determination of
the Need for Long Term Care



THE GERIATRIC FUNCTIONAL RATING SCALE

Client's Name _____

Case Record # _____

Caseworker _____

1/ PHYSICAL CONDITION		Score		Score		Score	Assigned Item Score
A) Eyesight	Good Watches TV Reads Needlework	0	Distinguishes Faces	-3	Sees Light Only	-10	
B) Hearing	Good	0	Loud Voice	-3	Deaf	- 5	
C) Mobility	Fully Mobile - Dresses Carries Parcels Rides Bus	0	Uses Cane or	-3	Requires Cane & other sup- port - Wheel- chair	-15	
D) Pulmo-Cardio- vascular Function	No Restrictions	0	1 Flight of Stairs 1 City Block	-3	Partly or to- tally Bed- ridden	-20	
E) Diet	No Restrictions	0			Yes	- 3	
F) Acute Health Condition	No				Yes diagnosis _____ _____ _____ _____		
2/ MENTAL CONDITION		Score		Score		Score	
A) Disorienta- tion	None	0	Time	-3	Person &/or Place	-15	
B) Delusions	None	0	Mild; Severe Suspiciousness	-3	Overt	-10	
C) Memory Loss	None	0	Benign	-3	Malignant	-20	
D) Energy & Drive	Normal	0			Hypoactive or Hyperactive	- 5	
E) Judgment	Intact	0			Impaired	- 5	
F) Hallucina- tions	None	0			Auditory &/or Visual	-10	

Addenda:

Question: Client's wishes or preferences regarding
nursing home placement?Response: Scorer writes response in narrative form in
this white space.

Total Minus Score _____

3/ FUNCTIONAL ABILITIES	Score
A) Reads and writes letters	+ 2
B) Able to use telephone	+ 5
C) Able to bank and shop	+ 5
D) Able to prepare simple meals and bake	+ 7
E) Washes, dresses, and toilets self without assistance	+ 5
F) Uses public transportation	+ 7
G) Able or would be able to take own medication and follow diet	+ 10
4/ SUPPORT FROM THE COMMUNITY	Score
A) Ethnic compatibility	+ 2
B) If living alone, can get support and help from a reliable relative, friend, neighbor, janitor	+ 10
C) Able to shop at reliable grocer's (willing to deliver when necessary)	+ 5
D) Available supportive and recreational facilities:	
- Clubs geared to aged	+ 2
- Church, synagogue	+ 1
- Library	+ 1
- Park, shopping center, restaurant, movies	+ 1
E) Geographic availability of	
- Public Health Nurses	+ 2
- Meals-on-Wheels service	+ 2
- Homemaker services	+ 2
- Friendly Visitor	+ 2
- Hospital with emergency and clinic facilities	+ 2
- Public transportation	+ 2
5/ LIVING QUARTERS	Score
Elevator service or living on ground floor or basement	+ 3
6/ RELATIVES AND FRIENDS	Score
A) Not married, but lives with compatible and helpful relative or friend	+ 5
B) Lives with incompatible relative, friend, or spouse	0
C) Lives with able and compatible spouse	+ 10
7/ FINANCIAL SITUATION	Score
A) Totally independent	+ 5
B) Dependent on helpful relative	+ 3
C) Dependent mainly on Old Age Pension and/or other community resources	0

SOURCE: Linda Noelker and Alan Bechman, "The Decision to Institutionalize" paper presented at the 1979 American Public Health Association Meeting.

MODIFIED RISK ASSESSMENT FORM

		<u>Score</u>		<u>Score</u>		<u>Score</u>
A.	Needs assistance with walking	Yes	10	No	0	
B.	Needs assistance with using toilet	Yes	5	No	0	
C.	Is continent or needs assistance with eating	Yes	10	No	0	
D.	Needs assistance with bathing, dressing, using toilet	Yes	5	No	0	
E.	Has been hospitalized in last year	Yes	10	No	0	
F.	Lives with spouse, friend or relative	Yes	0	No	5	
G.	Number of strokes		# of strokes x 5 =			
		<u>Score</u>		<u>Score</u>		<u>Score</u>
H.	Mobility level	partial 5	housebound	10	bedfast	10
I.	Vision		partial	3	blind	5
J.	Hearing		partial	3	deaf	5

Total Score _____

A total score of above 30 indicates person should receive home health care. A total score below 30 indicates that a person is not at risk of institutional placement and needs no home health, but perhaps needs homemaker or visitor services in the home.

Risk Assessment Form		Points		
Problems Difficulty with/or in need of 1 Yes 2 No		<input type="checkbox"/> Cooking 10 pts <input type="checkbox"/> Light Housekeeping <input type="checkbox"/> Chore/Heavy Housecleaning <input type="checkbox"/> Home Repair <input type="checkbox"/> Basic Marketing 5 pts <input type="checkbox"/> Shopping <input type="checkbox"/> In Home Care 10 pts <input type="checkbox"/> Instruction <input type="checkbox"/> Transportation 5 pts	Hospitalized (Within Last Year) 10 pts <input type="checkbox"/> 1 Yes <input checked="" type="checkbox"/> 2 No	
			Currently Seeing Doctor <input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No	
			Needs Medical Care <input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No	
			Current Social Condition (Within Last Year) 1 Yes 2 No <input type="checkbox"/> Loss of Spouse <input type="checkbox"/> Loss of Relatives/Friends <input checked="" type="checkbox"/> Needs more Social Contact 5 pts	
Health Current Condition 1 Severe 2 Moderate 3 Mild Each Severe 5 pts Each Moderate 2 pts		<input type="checkbox"/> Circulatory <input type="checkbox"/> Respiratory <input type="checkbox"/> Digestive <input type="checkbox"/> Diabetes <input type="checkbox"/> Arthritis <input type="checkbox"/> Stroke <input type="checkbox"/> Cancer <input type="checkbox"/> Malnutrition <input type="checkbox"/> Emotional Stress <input type="checkbox"/> Other	Housing Status <input type="checkbox"/> 1 Owned <input type="checkbox"/> 2 Rented <input type="checkbox"/> 3 Other	
			Condition <input type="checkbox"/> 1 Adequate <input type="checkbox"/> 2 Inadequate 5 pts	
			Type Dwelling <input type="checkbox"/> 1 Single Family <input type="checkbox"/> 2 Duplex <input type="checkbox"/> 3 Apartment <input type="checkbox"/> 4 Mobile Home <input type="checkbox"/> 5 Group Quarters	
			Protective Legal Services <input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No	
			Economic Conditions Benefits 1 Yes 2 No <input type="checkbox"/> Social Security <input type="checkbox"/> Medicare <input type="checkbox"/> Pension <input type="checkbox"/> VA <input type="checkbox"/> Public Assistance <input type="checkbox"/> SSI <input type="checkbox"/> Food Stamps <input type="checkbox"/> Medicaid <input type="checkbox"/> Other	
Mobility 1 Good (Score One Only) 2 Partial 3 Housebound 4 Bedfast		<input type="checkbox"/> 5 pts <input type="checkbox"/> 10 pts <input type="checkbox"/> 10 pts	Financial Difficulty .5 pts <input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No	
Wheelchair <input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No			Estimated Monthly Income <input type="text"/> <input type="text"/> <input type="text"/>	
Vision 1 Adequate 2 Partial 3 Blind		<input type="checkbox"/> 3 pts <input type="checkbox"/> 5 pts	Estimated Yearly Income <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
Glasses <input type="checkbox"/> 1 Has wears <input type="checkbox"/> 2 Has does not wear <input type="checkbox"/> 3 Has no glasses			Adjusted Income <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	
Hearing 1 Adequate 2 Partial 3 Deaf		<input type="checkbox"/> 3 pts <input type="checkbox"/> 5 pts	Wants to 1 Yes 2 No <input type="checkbox"/> Work <input type="checkbox"/> Volunteer	
Hearing Aid <input type="checkbox"/> 1 Has wears <input type="checkbox"/> 2 Has does not wear <input type="checkbox"/> 3 Has no aid			Total "At Risk" Points	
Teeth <input type="checkbox"/> 1 Adequate <input type="checkbox"/> 2 Inadequate				

SOURCE: Ruth Shepherd, "Nursing Home Costs Halved by Home Maintenance Program", HCFA Forum, Volume 2, #2, 1978, p. 34.

Studies of Patient Placement Cited in Table 1

Allison-Cooke, Sherry and Helen Thornberry. "Factors Affecting Nursing Home Medical Review", Medical Care, June 1977, pp. 494-503.

Noelker, Linda and Alan Bechman. "The Decision to Institutionalize: A Comparison of Social Work Clinical Judgment and the Geriatric Functional Rating Scale", paper presented at the American Public Health Association Conference, November 1979.

Orr, Martin. "Development of Numerical Standards for Patient Placement in New York State Long-Term Care Facilities", mimeo, April 18, 1978.

Palmore, Erdman. "Total Chance of Institutionalization Among the Aged", The Gerontologist, Volume 16, No. 6, 1975, pp. 504-507.

Parker, Rodger and Jeff Boyd. "A Comparison of a Discriminant Versus a Clustering Analysis of a Patient Classification for Chronic Disease Care", Medical Care, November 1974, pp. 944-957.

Sherwood, Sylvia, John N. Norris and Ester Barnhart. "Developing a System for Assigning Individuals into an Appropriate Residential Setting", Journal of Gerontology, Volume 30, 1975, pp. 331-342.

Vicente, Leticia, James A. Wiley and R. Allen Carrington. "The Risk of Institutionalization Before Death", The Gerontologist, Volume 19, November 4, 1979.

Attachment A-1

Common Information Collected by the SIP, NNHS, and HIS

1. Age.
2. Source of payment (Medicaid, Medicare, own funds).
3. Sex.
4. Birthdate.
5. Race or ethnic background.
6. Marital status.
7. Living with others now or prior to entering home.
8. Persons living with now or prior to entering home.
9. Whether person has recently seen a physician.
10. Use of aids (hearing aids, glasses, walker, etc.).
11. Need for help in bathing, dressing, eating, walking or using toilet room.
12. Impairment of vision or hearing.
13. Diagnostic category.

Attachment A-2

Scale Questionnaires

The Short Portable Mental Status Questionnaire

(NOTE: IF QUESTION NOT ASKED, GIVE REASON. FOR PRELIMINARY QUESTIONS, FAILURE TO ANSWER = "INCORRECT")

	CORRECT	INCORRECT	NOT ASKED	
2.01 First, what is the date today? MONTH DAY YEAR	1	2	9	](66)
2.02 What day of the week is it? _____	1	2	9	](67)
2.03 What is the name of this place? ("HOME", CITY, INSTITUTION, ETC.)	1	2	9	](68)
2.04 What is your telephone number? _____ (IF NO PHONE) What is your street address? _____	1	2	9	](69)
2.05 How old are you? _____ (ENTER FROM PAGE ONE IF JUST ASKED)	1	2	9	](70)
2.06 WHEN WERE YOU BORN? MONTH DAY YEAR	1	2	9	](71)
2.07 Who is the President of the U.S. now? (LAST NAME) _____	1	2	9	](72)
2.08 Who was the President just before him? (LAST NAME) _____	1	2	9	](73)
2.09 What was your mother's maiden name? (FEMALE FIRST NAME AND LAST NAME NOT CLIENT'S)	1	2	9	](74)
2.10 Next, please subtract 3 from 20 and keep subtracting 3 from each number you get, all the way down. (MUST GET ALL: 17, 14, 11, 8, 5, 2.)	1	2	9	](75)
[BLANKS]				(76-80)

SOURCE: Georgia Department of Medical Assistance, Alternative Health Services, Annual Report 1978-79, p. 3.

The Morale Scale

5.01	Next, we would like to know how you feel about a number of things. Please answer these questions "yes" or "no". First, do things keep getting worse as you get older?	YES	NO	N.D.		(07)
5.02	Do you have as much pep as you did last year?	2	1	9		(08)
5.03	Do little things bother you more this year?	1	2	9		(09)
5.04	Do you see enough of your friends and relatives?	2	1	9		(10)
5.05	Do you feel that as you get older you are less useful?	1	2	9		(11)
5.06	Do you have a lot to be sad about?	1	2	9		(12)
5.07	Do you take things hard?	1	2	9		(13)
5.08	Do you get upset easily?	1	2	9		(14)
5.09	Are you afraid of a lot of things?	1	2	9		(15)
5.10	Are you as happy now, as when you were younger?	2	1	9		(16)
5.11	Do you sometimes feel that life isn't worth living?	1	2	9		(17)
5.12	How much do you feel lonely - not much, or a lot?	NOT MUCH.....2 A LOT.....1 NOT DETERMINED.....9				(18)

SOURCE: Georgia Department of Medical Assistance, Alternative Health Services, Annual Report 1978-79, p. 11.

Instrumental Activities of Daily Living

- 6.01 Now I have some questions about certain activities. I'll be asking you to tell me whether you do some things by yourself, with some help from another person, or not at all. First, do you use the telephone by yourself, with some help, or don't you use the telephone? (IF NO PHONE, CIRCLE "3".)

BY SELF.....	1	(19)
WITH HELP (SOMEONE GETS NUMBERS OR DIALS).....	2	
DON'T USE PHONE.....	3	
NOT DETERMINED.....	9	

- 6.02 Do you get to places out of walking distance (requiring transportation) by yourself, with some help, or don't you go out of walking distance?

BY SELF (ALONE IN BUS, TAXI, CAR).....	1	(20)
WITH HELP (SOMEONE HELPS, GOES ALONG).....	2	
DON'T GO (UNLESS SPECIAL ARRANGEMENTS).....	3	
NOT DETERMINED.....	9	

- 6.03 Do you go shopping for groceries by yourself, with some help, or don't you go shopping?

BY SELF.....	1	(21)
WITH SOME HELP.....	2	
DON'T SHOP.....	3	
NOT DETERMINED.....	9	

- 6.04 (FOR WOMEN, READ "HOUSEWORK"; FOR MEN, "HANDYMAN WORK".)
Do you do your own housework (handyman work) by yourself, with some help, or don't you do housework (handyman work)?

BY SELF (INCLUDING HEAVY HOUSEWORK).....	1	(22)
WITH SOME HELP (DO LIGHT WORK, HELP WITH HEAVY WORK).....	2	
DON'T DO HOUSEWORK (HANDYMAN WORK).....	3	
NOT DETERMINED.....	9	

- 6.05 Do you cook your own meals by yourself, with some help, or don't you cook your meals?

BY SELF.....	1	(23)
WITH SOME HELP.....	2	
DON'T COOK.....	3	
NOT DETERMINED.....	9	

Instrumental Activities of Daily Living
(continued)

- 6.06 Do you do your own laundry by yourself, with some help, or does someone do all your laundry for you?

BY SELF (ALL OWN LAUNDRY).....	1	
WITH SOME HELP (DOES SMALL ITEMS ONLY)...	2	
SOMEONE DOES ALL.....	3	
NOT DETERMINED.....	9	(24)

- 6.07 Do you take your own medicine by yourself, with some help, or does someone give it to you?

BY SELF (RIGHT DOSAGE, RIGHT TIME).....	1	
WITH SOME HELP (SOMEONE REMINDS CLIENT OR PREPARES IT).....	2	
SOMEONE GIVES IT.....	3	
DOES NOT TAKE MEDICINE (NOT NEEDED).....	8	
NOT DETERMINED.....	9	(25)

- 6.08 Next, please think about things like depositing your money in the bank or paying your bills. Do you manage your own money - such things as depositing money or paying a bill - by yourself, do you get some help, or don't you handle your money?

BY SELF.....	1	
WITH SOME HELP (MANAGES DAY-TO-DAY BUYING BUT GETS HELP WITH CHECKBOOK, BILL PAYING, ETC.).....	2	
DON'T HANDLE MONEY.....	3	
NOT DETERMINED.....	9	(26)

SOURCE: Georgia Department of Medical Assistance, Alternative Health Services, Annual Report 1978-79, p. 12-13.

Guttman Health Scale
(Rosow functional scale)

H-4. Is there any physical condition, illness, or health problem that bothers you now?

- + A. No
- B. Yes

H-6. Which of these things are you still healthy enough to do without help?

- + A. Heavy work around the house, like shoveling snow or washing walls?
- B. (Men) Work at a full-time job.
(Women) Do the ordinary work around the house yourself.
- + C. Walk half a mile (about eight ordinary blocks).
- + D. Go out to a movie, to church or a meeting, or to visit friends.
- + E. Walk up and down stairs to the second floor.

H-10. Which of these statements fits you best?

- A. I cannot work (keep house) at all now because of my health.
- B. I have to limit some of the work or other things that I do.
- + C. I am not limited in any of my activities.

Table 1. Health Scale Items.

Question Items		Healthy Response Category	% Healthy Response	% Item Error
H-6.	Still healthy enough to do without help:			
D	Go out to movie, church, meeting, visit	Yes	86	12
E	Walk up and down to second floor	Yes	79	12
C	Walk half a mile	Yes	69	4
H-10.	Which statement fits you best:			
C	Not limited in any activities	Yes	53	9
H-4.	Physical condition or illness now?			
A	No	No	46	12
H-6.	Still healthy enough to do without help:			
A	Heavy work around the house	Yes	21	5

Coefficient of Reproducibility = .91

SOURCE: Irving Rosow and Naomi Breslau, "A Guttman Health Scale for the Aged", Journal of Gerontology, 1966, 24, p. 557.

Index of the Activities of Daily Living

Bathing—either sponge bath; tub bath, or shower.

- | | | |
|--|--|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Receives no assistance (gets in and out of tub by self if tub is usual means of bathing) | Receives assistance in bathing only one part of the body (such as back or a leg) | Receives assistance in bathing more than one part of the body (or not bathed) |

Dressing—gets clothes from closets and drawers—including underclothes, outer garments and using fasteners (including braces if worn)

- | | | |
|---|---|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Gets clothes and gets completely dressed without assistance | Gets clothes and gets dressed without assistance except for assistance in tying shoes | Receives assistance in getting clothes or in getting dressed, or stays partly or completely undressed |

Toileting—going to the "toilet room" for bowel and urine elimination; cleaning self after elimination, and arranging clothes

- | | | |
|---|---|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Goes to "toilet room," cleans self, and arranges clothes without assistance (may use object for support such as cane, walker, or wheelchair and may manage night bedpan or commode, emptying same in morning) | Receives assistance in going to "toilet room" or in cleansing self or in arranging clothes after elimination or in use of night bedpan or commode | Doesn't go to room termed "toilet" for the elimination process |

Transfer—

- | | | |
|--|--|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Moves in and out of bed as well as in and out of chair without assistance (may be using object for support such as cane or walker) | Moves in and out of bed or chair with assistance | Doesn't get out of bed |

Continence—

- | | | |
|--|----------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Controls urination and bowel movement completely by self | Has occasional "accidents" | Supervision helps keep urine or bowel control; catheter is used, or is incontinent |

Feeding—

- | | | |
|-------------------------------|---|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Feeds self without assistance | Feeds self except for getting assistance in cutting meat or buttering bread | Receives assistance in feeding or is fed partly or completely by using tubes or intravenous fluids |

SOURCE: Sidney Katz et al., "Progress in the Development of the Index of ADL", Gerontologist, 10(1):20, Spring 1970, pt. 1.

Attachment A-3

Variable Necessary of Methodologies
for Patient Placement

Table 1Variables Needed for Methodology Developed by Sherwood

<u>Variable</u>	<u>Available</u> ^{1/}	<u>Substitutes</u> ^{2/}
<u>EQUATION 1</u>		
Functional Health Scale (Rosow)	No	X
Presently living in nursing home	Yes	
Katz Index Score	Yes	
Orientation Score	No	
Number of persons as friends	No	
Present membership in club, org., church	No	
Morale Scale (0-20)	No	
Presently receives financial assistance	No	X
Presently living alone or with spouse	Yes	
Ability to read English papers	No	X
Educational level	No	X
Family Occupation	No	X
Shares bath with non-family member	No	
Prefers not to live in nursing home	No	
<u>EQUATION 2</u>		
Confusion: knows examiner's name	No	
knows month	No	
Katz-dressing	Yes	
Need for Meal Service:		
does own marketing	No	X
problem with cooking	No	X
needs professional help	No	X
Anxiety Index	No	
Opportunity for Peer Group Relations	No	

1/ "Available" means the variable is included in each of the three surveys proposed for use in our model.

2/ "Substitutes" means that the surveys provide information close in meaning to the desired variable, but not identical.

Table 2Variables Needed for Methodology Developed by New York State

	<u>Available</u> ^{1/}	<u>Substitutes</u> ^{2/}
<u>Nursing Care and Therapy</u>		
medication-parenteral	Yes	
medications-legend	Yes	
cath/tube irrigation	No	
inhalation treatment	No	
oxygen	No	
lesion irrigation	No	
aseptic dressing	No	
suctioning	No	
parenteral fluids	No	
tube feedings	No	
bowel and bladder training	Yes	
bedsore treatment	No	
other	No	
Receipt of skilled nurse observation and assessment	No	
Receipt of skilled rehabilitation	No	
Incontinence	Yes	
<u>Functional Status</u>		
walking	Yes	
transferring	Yes	
wheeling	Yes	
eating/feeding	Yes	
toileting	Yes	
bathing	Yes	
dressing	Yes	

^{1/} "Available" means the variable is included in each of the three surveys proposed for use in our model.

^{2/} "Substitutes" means that the surveys provide information close in meaning to the desired variable, but not identical.

Table 2 (continued)

	<u>Available</u> ^{1/}	<u>Substitutes</u> ^{2/}
<u>Mental Status</u>		
alert	No	
confused	No	X
agitated	No	
hallucinates	No	
assaultive	No	
abusive	No	
requires restraints	No	
regressive behavior	No	
other	No	
<u>Impairments</u>		
sight	Yes	
hearing	Yes	
speech	No	
other	No	

Table 3Variables Needed for the Geriatric Functional Rating Scale

<u>Variables</u>	<u>Available^{1/}</u>	<u>Substitutes^{2/}</u>
<u>Physical Condition</u>		
Eyesight	Yes	
Hearing	Yes	
Mobility	Yes	
Pulmo-Cardiovascular Function	No	X
Diet	No	X
Acute Health Condition	Yes	
<u>Mental Condition</u>		
Disorientation	No	X
Delusions	No	X
Memory loss	No	X
Energy and drive	No	
Judgment	No	X
Hallucinations	No	
<u>Functional Abilities</u>		
Reads and writes letters	No	X
Able to use telephone	No	X
Able to shop and bank	No	X
Able to prepare simple meals	No	X
Washes, dresses, toilets without assistance	Yes	
Uses public transportation	No	X
Able to take medication and follow diet	No	X
<u>Relatives and Friends</u>		
Not married, lives with friend or relative	Yes	
Lives with able spouse	Yes	
<u>Financial Situation</u>		
Totally independent	Yes	
Dependent on helpful relative	Yes	
Dependent on Old Age Pension or Community Resources	Yes	

^{1/} "Available" means the variable is included in each of the three surveys proposed for use in our model.

^{2/} "Substitutes" means that the surveys provide information close in meaning to the desired variable, but not identical.

Table 4Variables Needed by the Risk Assessment Form

	<u>Available</u> ^{1/}	<u>Substitutes</u> ^{2/}
Hospitalized within last year	No	X
Cooking	No	X
Basic marketing	No	X
Needs more social contact	No	X
In-home care needed	No	X
Transportation	No	X
Housing condition	No	
Stroke	Yes	
Mobility	Yes	
Vision	Yes	
Hearing	Yes	
Financial difficulty	No	X

1/ "Available" means the variable is included in each of the three surveys proposed for use in our model.

2/ "Substitutes" means that the surveys provide information close in meaning to the desired variable, but not identical.

APPENDIX B

REVIEW OF SUPPLY MEASURES FOR LONG-TERM CARE

In the Supply Module of the Long-Term Care Model, we will use utilization as a proxy for the supply of services to public patients. This approach is based upon the assumption that utilization is constrained by supply and that there are few states in which there is an excess supply of services for public patients. To check this assumption, we talked with state officials, reviewed the relevant research literature and used other relevant data on the supply of long term care services. This Appendix summarizes our findings and conclusions.

I. SUPPLY OF SNF AND ICF BEDS TO PUBLIC PATIENTS

A. Data Sources

We considered the following data sources for determining whether a state had an excess supply of nursing home beds for public program patients:

- National Nursing Home Survey - Occupancy Rates -- Although we considered using these data, there were several serious problems with the reported occupancy rates. The Medicaid occupancy rates were calculated by dividing the average daily Medicaid census by the total number of Medicaid certified beds since many of these Medicaid certified beds are used by private patients, the occupancy rates are understated. In addition, the rates are only available for regions and not by state.

- Medicare - Number of Discharges, Total Days, and Mean Length of Stay for Short Stay Hospital Discharges by State - 1978 -- One measure of the availability of nursing home beds for Medicare recipients is the proportion of Medicare patients having acute care hospital stays longer than 29 days. This approach assumes that the proportion of such Medicare patients would be relatively consistent from state to state. A lower proportion of Medicare patients with lengthy hospital stays suggests that there are fewer patients in hospitals awaiting long term care in nursing homes. This situation would indicate that there may be an adequate supply or a surplus of nursing home beds for Medicare patients.
- The Number of SNF and ICF Beds Per Thousand Elderly -- There is wide variation between states in the number of beds per thousand elderly - Florida has 23.9 beds per thousand elderly while Nebraska has 119.1 beds per thousand elderly.^{1/} While the proportion of the population that is elderly, average per capita income, and other factors influence the underlying demand for nursing home beds in individual states, a very high number of beds per thousand elderly may indicate an excess supply of beds.
- AAPSRO Data on Administrative Care Days -- The AAPSRO requested all PSROs to conduct a 100 percent survey of the Medicare and Medicaid patients in acute care hospitals who were on administrative care days on September 4, 1980. Persons counted in this survey would include those waiting to go home as well as those awaiting nursing home placement. The AAPSRO statistics help indicate which states have few public patients awaiting placement.

^{1/} Master Facilities Inventory 1976 - unpublished data - NCHS, Hyattsville, Maryland.

^{2/} American Association of PSROs - One Day Preliminary Results Census - September 1980.

- ICF Study - Comparison of Policies, Practices, and Programs Affecting Long Term Care in Twenty-Eight Metropolitan Areas
- For 28 SMSAs in 18 states, we have data on state planners' perceptions of the availability of SNF and ICF beds to public patients.

B. State Survey

Taken together, these sources suggested that the following states might have an excess supply of beds for public patients. We called Medicaid officials in these states to determine whether there was adequate nursing home supply for Medicare and Medicaid patients.

A) Alabama

1) Supply Indicators

- Low Proportion of Medicare Patients with Acute Care
- Hospital Lengths of Stay greater than 29 days
(3.1 percent)
- Average Number of Beds per 1,000 Elderly - 50.2
- Relatively Low Number of Medicare Administrative Care Days in the PSRO one day survey (1.8 percent of Medicare SNF patients)

2) Conversation with Charlie Stuart (#205-832-6795), SHPDA

Alabama recently revised the methodology for projecting beds needs - lowered projection from 2,000 to 165 statewide beds still needed. These bed projections are made by county - using occupancy rates, projected population trends, and state average for beds per 1,000 elderly. Some counties have excess beds. 75 percent of the beds are occupied by Medicaid patients.

If Alabama could build beds according to the underlying need for services (without the financial constraint of keeping under the statewide average number of beds per thousand), than the state would need more nursing home beds.

B) Colorado

1) Supply Indicators

- High Number of Nursing Home Beds Per Thousand Elderly (104.3)
- Low Proportion of Medicare Patients with Acute Care Hospitals Lengths of Stay greater than 29 days (4.1 percent)
- High Perceived Availability of SNF/ICF beds in Denver to public patients by the state health planners surveyed in the Weissert study.
- Occupancy Rate in Denver Nursing Homes = 87.3 percent

2) Conversation with Bob Lander, State Division of Health Planning and Regulation

There is an excess number of beds in state for LTC. However, the underserved areas in the state may require additional beds.

According to the 1980 Colorado state health plan, there is an excess of 3,938 beds. Half of this excess is at the SNF level and half is at the ICF level. Approximately 85 percent of the patients in Colorado long term care facilities are on Medicare or Medicaid patients.

C) Indiana

1) Supply Indicators

- Low Proportion of Medicare Patients Using Administrative Care Days in the AAPSRO one-day survey
- High Perceived Availability of SNF/ICF beds to public patients in Indianapolis by the state health planners surveyed in the Weissert study
- Average Number of Beds per 1,000 Elderly = 69.7

- 2) Conversation with Dr. David Bruns, Medicaid Division, Indiana Department of Public Welfare (317-232-4333)

There is an adequate supply, but not excess supply the proportion of beds may have to be adjusted in some areas (SNF/ICF ratio)

Under CON, the state is still approving new bed construction, and the nursing homes are maintaining fairly high occupancy rates

C) Nebraska

- 1) Supply Indicators

- High Number of Nursing Home Beds Per Thousand Elderly (119.1)
- Low Proportion of Medicare Patients with Acute Care Hospital Lengths of Stay greater than 29 days (4.1 percent)

- 2) Conversation with Burke Caffari, State Health Planning Agency, #402-471-2105 and Steve Fredericks #402-471-2337

For 1980, there is a 2,481 bed excess supply of ICF beds. Roughly 1/2 of the patients are Medicaid or Medicare patients. In Lincoln, Nebraska there is an appropriate number of beds. However, there are empty beds in the western and middle part of the state and some facilities have dropped their Medicaid certification because they have been unable to maintain the 85 percent occupancy level required for full reimbursement.

On a statewide level, the average occupancy rate is 90 percent.

D) Oklahoma

1) Supply Indicators

- Low Proportion of Medicare Patients with Acute Care Hospital Lengths of Stay greater than 29 days (3.0 percent)
- High Number of Nursing Home Beds Per Thousand Elderly (78.6)
- High Perceived Availability of SNF/ICF beds to Public Patients by the state health planners surveyed in the Weissert study
- Low Proportion of Medicaid Nursing Home Patients Using Administrative Care Days (AAPSRO survey) - .004 percent
- Average Proportion of Medicare Nursing Home Patients Using Administrative Care Days - (AAPSRO study) - 3.8 percent
- Occupancy Rate in Oklahoma City SMSAs = 75-94 percent

2) Conversation with Don Doenitz, Oklahoma HSA
(#405-424-5591)

There is an adequate supply of both SNF and ICF level care to public pay patients. There is not, however, a surplus of such beds and since CON proposals for additional construction are still being approved and are still demonstrating the need for new ICF level facilities. There are very few SNF beds in Oklahoma, yet the supply seems adequate for meeting the demand. Ninety percent of the nursing home beds in Oklahoma are filled by Medicaid or Medicare patients.

3) Charter Hall, Oklahoma Nursing Home Association
(#405-521-0941)

Also said that there was an adequate supply, but not an excess of nursing home beds for public pay patients in Oklahoma

C. Other Information Sources

An additional method of investigating the excess supply issue was by consulting other long term care specialists. An official at the American Health Care Association said that, at a localized level, there may be some excess supply of beds. However, from a statewide perspective, "there is definitely not an excess supply of beds to public pay patients."^{1/}

Reviewing the literature on nursing home utilization, William Scanlon concludes that the quantity of nursing home care demanded is probably larger than the amount supplied.^{2/} In his own study of the factors influencing the supply of nursing home beds from 1969 to 1973, William Scanlon also found strong support for the "excess demand hypothesis."^{3/} To test this hypothesis, Scanlon used an unfilled beds variable reflecting the probability of finding a bed given demand. As hypothesized, the variable significantly affected total utilization but had no impact on private demand.

D. Conclusions - Institutional Care

In all states except Colorado and Nebraska, there does not seem to be an excess supply of beds at the statewide level. Therefore, except in these states, we can assume that the supply of nursing home care to public pay patients is generally equal to their utilization.

II. SUPPLY OF ICFs FOR THE MENTALLY RETARDED

It is difficult to determine the availability of ICF/MR beds because of poor reporting to government agencies. Mark Freeland of HCFA told us that national information on the supply of ICF/MR beds is difficult to find because facilities occasionally switch an ICF nursing bed to an ICF/MR. This has occurred in the Denver area, with a number of developmentally disabled people improperly taken care of in geriatric facilities.

^{1/} Susan Harris, American Health Care Association.

^{2/} Scanlon, William: Nursing Home Utilization Patterns: Implications for Policy, The Urban Institute, 1980.

^{3/} Scanlon, William, Aspects of the Nursing Home Market, Private Demand, Total Utilization, and Investment, The Urban Institute, February 1978.

State officials in Nebraska, Indiana, Colorado and Alabama reported that the supply of ICF was adequate but not excessive. In Indiana and Nebraska, state laws are being altered to permit Medicaid ICF/MR reimbursement for smaller community facilities with 6-15 beds. We will compare our model estimates of demand with historical utilization to try to assess whether utilization of ICF/MR care is constrained by supply.

III. SUPPLY OF HOME HEALTH SERVICES

In the HCFA Model, we can assume that supply is equivalent to utilization of HHA services. Several sources reported that there was a shortage of HHA services in most areas, particularly for Medicaid recipients. The comments of HHA specialists and the research literature findings are summarized below.

- 1) Trager, Brahna, "Home Health Care and National Policy." Special issue of Home Health Care Services Quarterly, Volume #2, Spring 1980.
 - a) Supply and Utilization of Medicare Home Health -- The study reports that utilization of Medicare home health services is constrained by: the three day hospital requirement, the "home bound requirement," the legislative emphasis on the need for skilled services, the inadequate distribution of provider agencies, differences in interpretation of the benefits by financial intermediaries, confusions concerning covered services by referral agencies, and the fact that covered services do not correspond to the needs of the Medicare population.^{1/}
 - b) Utilization and Supply of Medicaid HHA -- Medicaid utilization is constrained by the "lack of provider agencies, variability of eligibility requirements, and the fact that covered services are often of limited duration and limited service content."^{2/} Providers

^{1/} Trager, p. 53. Effective fiscal year 1981, the three day prior hospital stay requirement was eliminated for home health care services.

^{2/} Trager, p. 53.

frequently refuse to accept Medicaid referrals -- in part because of reimbursement strategies that have restricted its use -- but also because of the inadequacy of implied Medicare definitions and Medicaid regulation as they relate to need.^{1/} The state schedules of maximum allowances for Medicaid Home Health visits pay for only 50 percent of the actual costs, according to providers.^{2/}

- 2) Doherty, Segal and Hicks - "Alternatives to Institutionalization for the Aged: Viability and Cost Effectiveness"

This study found that there is a large number of elderly persons who lack access to home health care. In some locations, especially rural areas and inner cities, there are no home health services available.

- 3) Sandy Kropp, Visiting Nurses Association of Washington, D.C.

There is a waiting period for people requesting home health services in Washington, D.C. The wait is not necessarily any longer for Medicaid and Medicare patients than for private pay patients.

- 4) Anne Freeman - Human Resources Division - GAO (245-9623) - conducting a study of Home Health Services in six states.

She has not found any areas where there is a surplus of home health services.

- 5) UpJohn official (#882-6163) Health Care Unit

He said there were no extreme shortages of HHA services and no excess supply of services in any states.

1/ Trager - p. 14.

2/ Trager - p. 14.

6) Judith Mooney - New York State, Office of Health Systems Management - Office of HMOs and Home Health

In New York state (which accounts for 75 percent of nationwide Medicaid Home Health expenditures) there is not an excess supply of home health services for public patients. The health planners feel that there is a shortage of home health agencies in the state. The Medicaid rate ceiling (approximately \$38 per visit - 1980) is adequate to cover the costs of free-standing agencies. Since these are available in nearly every New York state county, there are at least some services for Medicaid eligibles needing Home Health. The facility based agencies cannot provide services for only \$38 per visit and therefore prefer not to serve Medicaid recipients.

7) Mr. Val J. Halamandari - National Association of Home Health Providers

There is no excess supply of home health services. Especially in rural areas, it is often difficult to find HHA services.

8) State Health Planners in ICF Study entitled "Comparison of Policies, Practices, and Programs Affecting Long Term Care in 28 Metropolitan Areas

Health planners in the 18 states gave a wide range of answers to questions regarding the availability of HHA services for public patients. Most states reported an inadequate number of HHA services to public patients. Texas, Colorado, Illinois, New Jersey, Oklahoma, and Ohio reported that HHA services were available to all public patients.

TABLE 1A

AVAILABLE INFORMATION ON SUPPLY OF NURSING HOME BEDS
AND ON MEDICARE UTILIZATION IN EACH STATE

State	Proportion of Hospital Medicare Patients with Length of Stay 1/ 29 Days+1/	Number of Nursing Home Beds Per 1,000 Elderly (SNF & ICF & PC) 2/	PSRO DATA 3/		Average LOS Medicare-Aged 1976 Total Days of SNF Care (Table (AA85) 5/	No. of Recipients (Summary of Utilization, Table 1976) 6/	ALOS
			% of Medicare Nursing Home Patients Waiting in Hospital for Nursing Home on September 4, 1980	AAPSRO Percent in Hospital Waiting			
			1977 Medicare Nursing Home recipients (Admissions 000s) (States Reporting Medicaid & PSRO)				
U.S. TOTAL	5.5%	61.3	404	2.5%	9,394,184	285,420	33
Alabama	3.1%	50.2	9	1.8	118,270	5,180	23
Alaska	4.2	86.9	--	--	533	--	--
Arizona	4.2	25.2	3	2.4	79,663	2,400	33
Arkansas	2.9	71.5	1	3.9	17,066	640	26
California	3.6	65.2	109	8.7	1,192,219	48,800	24
Colorado	4.1	104.3	5	--	72,001	2,620	27
Connecticut	6.2	73.9	17	1.2	229,512	7,980	29
Delaware	7.6	43.7	1	7.4	15,552	320	48
D.C.	10.2	39.9	1	12.5	16,981	420	40
Florida	3.9	23.9	24	8.2	589,247	17,280	34
Georgia	2.9	66.5	5	--	83,526	3,420	24
Hawaii	5.0	53.1	2	3.0	36,838	1,120	33
Idaho	2.3	59.5	2	.8	28,016	980	28
Illinois	6.7	75.4	21	.5	459,853	14,000	33
Indiana	5.4	69.7	28	.1	217,036	6,820	32
Iowa	3.7	92.3	4	5.2	85,615	2,740	31
Kansas	5.2	80.3	3	3.9	74,881	2,040	37
Kentucky	3.7	56.2	8	3.1	166,780	5,320	31
Louisiana	4.3	53.9	2	--	54,856	1,640	33
Maine	4.8	70.5	2	6.2	65,894	2,060	32
Maryland	7.6	54.7	6	3.9	135,799	3,500	39
Massachusetts	8.9	74.7	12	1.9	303,123	8,500	36
Michigan	6.2	80.0	22	2.3	497,344	13,440	37
Minnesota	4.7	96.7	8	--	149,595	4,240	35
Mississippi	4.4	34.8	1	1.6	16,429	640	26
Missouri	5.9	55.5	7	5.9	182,251	5,160	35
Montana	2.8	69.3	1	3.0	31,907	1,200	27
Nebraska	4.1	119.1	3	--	60,568	1,960	31
Nevada	3.5	34.9	2	4.5	34,675	1,100	31
New Hampshire	4.3	70.1	3	1.0	68,929	1,960	35
New Jersey	9.2	43.2	16	7.2	426,279	10,860	39

TABLE 1A (Continued)

AVAILABLE INFORMATION ON SUPPLY OF NURSING HOME BEDS
AND ON MEDICARE UTILIZATION IN EACH STATE

State	Proportion of Hospital Medicare Patients with Length of Stay 1/ 29 Days+	Number of Nursing Home Beds Per 1,000 Elderly (SNF & ICF & PC) 2/	PSRO DATA 3/		Average LOS Medicare-Aged		ALOS
			% of Medicare Nursing Home Patients Waiting in Hospital for Nursing Home on September 4, 1980	AAPSR0 Percent in Hospital Waiting	1976 Total Days of SNF Care (Table AA85) 5/	No. of Recipients (Summary of Utilization, Table 1976) 6/	
New Mexico	3.5	35.8	0	--	9,578	360	27
New York	11.6	50.5	62	5.7	1,089,149	27,580	39
North Carolina	5.2	48.0	9	3.6	289,581	5,360	56
North Dakota	3.7	91.7	--	--	11,846	400	29
Ohio	6.2	59.6	26	1.5	636,712	17,240	37
Oklahoma	3.0	78.6	2	3.8	40,188	1,600	25
Oregon	3.0	64.6	6	1.6	134,261	4,440	30
Pennsylvania	6.9	44.1	30	2.6	642,490	18,180	35
Rhode Island	6.2	63.2	5	.8	75,460	2,620	29
South Carolina	4.4	36.3	4	8.2	75,330	2,360	32
South Dakota	3.3	97.5	1	4.3	11,498	560	21
Tennessee	4.3	44.4	3	3.4	92,029	2,860	32
Texas	3.8	85.6	7	--	198,458	5,560	36
Utah	2.0	49.1	2	2.7	42,621	1,180	36
Vermont	5.5	96.8	2	5.0	40,124	1,260	32
Virginia	6.3	57.7	3	15.7	89,585	2,420	37
Washington	2.4	81.8	10	9.4	193,735	9,020	21
West Virginia	4.1	26.1	3	5.6	46,308	1,160	39
Wisconsin	5.6	100.5	4	12.3	111,594	2,600	43
Wyoming	3.7	56.6	0	--	5,864	200	29

1/ Medicare - Number of Discharges, Total Days, and Mean Length of Stay for Short Stay Hospital Discharges by State - 1978.

2/ Unpublished Data from the 1976 nursing home and other inpatient health facility survey for the Master Facility Inventory combined with unpublished data from the cooperative Health Statistics System, NCHS, Hyattsville, Maryland, 1977.

3/ American Association of PSROs - One Day Census - September 8, 1980 Preliminary results.

4/ Medicare - Health Insurance for the Aged and Disabled - selected state data 1973-1977 - HCFA.

5/ Medicare data - Table AA85 Aged - Number of Extended Care Facility Bills, Covered Days of Care, Covered Charges, and Amount Reimbursed - HCFA 1980.

6/ Medicare data - Table 1.2.1 Summary of Utilization and Reimbursement for Persons Aged 65 - HCFA 1976.

TABLE 1B

AVAILABLE INFORMATION ON SUPPLY OF NURSING HOME BEDS
AND ON MEDICAID UTILIZATION IN EACH STATE

U.S. TOTAL	PSRO DATA ^{1/}		Weissert Study ^{3/} Perceived Availability of SNF/ICF Care to Needy		Medicaid ALOS - 1976	
	% of Medicaid Nursing Home Patients Awaiting in Hospital for Nursing Home Placement September 4, 1980	AAPSRO Percent in Hospital Waiting (4,100 Total)	SNF	ICF	Location	SNF
	1976 ^{2/} Medicaid Patients (SNF/ICF) (000s)					ICF ^{2/} (Table 5C - Medicaid Table 5)
Alabama	20.4	.37%				186
Alaska	.6	.06				239
Arizona	0	.83	2	1	Phoenix	255
Arkansas	18	--				149
California	126	0000				--
Colorado	-22	.29	1-3	1	5 Areas	145
Connecticut	16.7	.32	3	3	Denver	178
Delaware	1.2	.66				155
D.C.	1.7	.63				--
Florida	23	8.9	1	1	Miami, Tampa	--
Georgia	32	.63	1	1	Atlanta	129
Hawaii	3	1.7				218
Idaho	4	0000				377
Illinois	100	.004				231
Indiana	28	.01				151
Iowa	18	.11				209
Kansas	15	.09				147
Kentucky	13	.18				169
Louisiana	22	.02				243
Maine	15	.62				147
Maryland	15	.98			Chicago	150
Massachusetts	58.7	.57			Indianapolis	260
Michigan	54	.1	2	1	Boston	60
Minnesota	44	.12	2	2	Detroit	321
Mississippi	10	.89				161
Missouri	12	.37				259
Montana	22					146
Nebraska	10	Did Not Report				--
Nevada	2	.70				--
New Hampshire	5	.06				--
New Jersey	25.8	1.0	1	1	Newark	186
						245
						239
						255
						149
						--
						--
						145
						178
						155
						--
						--
						--
						129
						218
						377
						231
						151
						209
						147
						169
						243
						147
						150
						260
						60
						321
						161
						259
						146
						182
						--
						--
						--
						195
						243
						177
						201
						229
						205
						268
						250
						227
						194
						237
						186
						195
						171
						287
						192
						199
						123
						305
						110
						256

TABLE 1B (Continued)

AVAILABLE INFORMATION ON SUPPLY OF NURSING HOME BEDS
AND ON MEDICAID UTILIZATION IN EACH STATE

	PSRO DATA ^{1/}		Weissert Study ^{3/} Perceived Availability of SNF/ICF Care to Needy		Medicaid ALOS - 1976 (Table 5C - Medicaid Table 5) SNF ^{4/} ICF ^{4/}	
	% of Medicaid Nursing Home Patients Awaiting in Hospital for Nursing Home Placement September 4, 1980		AAPSRO Percent in Hospital Waiting (4,100 Total)			
	1976 ^{2/} Patients (SNF/ICF) (000s)	Patients (SNF/ICF) (000s)				
New Mexico	3	.60	1	2	50	148
New York	181	.8			--	--
North Carolina	155	.11			140	192
North Dakota	3.2	.09			260	259
Ohio	43	.21	1	12	225	251
Oklahoma	23	.004	3	3	85	271
Oregon	11	.16			110	227
Pennsylvania	98.2	.13			--	--
Rhode Island	10.9	.47			--	--
South Carolina	11	.31			174	199
South Dakota	5	.02			239	265
Tennessee	18	.03	2	2	35	246
Texas	86	Did Not Report	1	1	124	514
Utah	4	.07			217	272
Vermont	3.6	.69			98	211
Virginia	13	.44			132	246
Washington	26	.20			--	--
West Virginia	4	.77	2	2	94	--
Wisconsin	56	.20			--	--
Wyoming	7.2	0000			29	--

1/ American Association of PSROs - One Day Census - September 8, 1980 Preliminary results.

2/ Medicaid Form 2082 Data - Table 4 HCFA 1976.

3/ Weissert, William (with ICF as subcontractor). Comparison of Policies, Practices, and Programs Affecting Long Term Care in 28 States - 1980.

4/ Medicaid data - Form 2082s - Table HCFA.

APPENDIX C

FINDINGS REGARDING LONG-TERM CARE PLACEMENT PATTERNS

APPENDIX C

FINDINGS REGARDING LONG-TERM CARE PLACEMENT PATTERNS

I. OVERVIEW

In this Appendix, we present our methodology for incorporating long term care (LTC) placement patterns into the Long-Term Care Model. In the Need Module, the ideal LTC needs of the population are projected. Translating these ideal levels into actual utilization and expenditures requires consideration of actual placement patterns. These placement patterns affect the model in three areas:

- The Eligibility Module should reflect how strictly LTC program eligibility criteria are applied to potential recipients. For example, do Medicare beneficiaries in need of ICF level care get SNF or hospital care, because Medicare does not cover ICF services?
- The Demand Module should indicate what LTC services are sought by people needing types of care that are not covered. For example, if Medicare allows individuals needing ICF care to be eligible in some states, are they placed in SNFs or in home health care programs?
- The Utilization Module should reflect the placement priorities that are assigned when demand exceeds the supply of services. Specific placement issues include what priority is given different classes of patients, when there is an inadequate supply of LTC services, and when are acute care hospital beds used by LTC patients awaiting placement in LTC facilities?

II. APPROACH

To examine these placement issues we reviewed the literature on nursing home and alternative care placement patterns (see Attachment C-1). We also talked with officials familiar with placement practices in five states and the District of Columbia and in the Office of PSROs in HCFA. At the state level, licensure and certification officials provided us with information on institutional placement. The State Health Planning and Development Agency specialists in long term care were also useful sources of information on these issues. For noninstitutional services placement patterns, we talked with Home Health Agency planners, Title XX officials, and Department of Social Service administrators. Information on hospital patients awaiting placement in LTC facilities was provided by state Bureaus of Hospital Services the Office of PSROs in HCFA, and by the American Association of PSROs (AAPPRO).

The following criteria were used to select states we telephoned to discuss placement patterns:

- varying levels of Home Health Expenditures per Elderly Person - to see what effect the availability of home health agency (HHA) services had upon a state's use of institutionalized services.
- varying levels of Nursing Home Beds per 1,000 Elderly and Nursing Home Expenditures per 1,000 Elderly - to see how an oversupply of nursing home beds affected placement patterns.
- varying levels of Title XX coverage and expenditures - to see whether the level of Title XX services affected use of nursing homes.
- high levels of Medicaid expenditures - to study several states which account for significant portions of federal Medicaid expenditures.
- varying proportions of ICF beds to SNF beds - to see what effect the relative availability of ICF versus SNF beds has upon nursing home placement.

The information sources for the first three criteria are described in Attachment C-2. To determine which states had a low proportion of SNF beds to ICF beds, we used unpublished data from the 1976 Master Facilities Inventory.

Based on these criteria, the following states were chosen for study:

- California - large Medicaid expenditures, high Title XX expenditures, high ratio of SNFs to ICFs
- Massachusetts - high nursing home beds to elderly ratio, high Medicaid expenditures
- North Carolina - low nursing home bed to elderly ratio
- New York State - large Medicaid expenditures, high HHA expenditures per elderly person
- Oklahoma - low HHA expenditures per elderly person, low Title XX coverage and expenditures, low ratio of SNFs to ICFs.

III. FINDINGS

Table 1 presents the results of our telephone conversations with officials in the five states, HCFA, and AAPSR0. This section summarizes these results and describes the relevant research literature on the eligibility, demand, and utilization issues.

A. Eligibility and Demand Issues

1. What happens if a Medicare eligible person needs ICF level care?

Because Medicare covers SNF and HHA services, but not ICF level services, we inquired where Medicare-eligible individuals in need of ICF services are placed. A HCFA official in the PSRO office, Division of Program Operations said that states would allow some ICF Medicare patients to be classified as SNF patients. A Massachusetts official in the Department of Public Welfare said that SNF care was defined broadly

TABLE 1

MEDICARE AND MEDICAID LTC PLACEMENT PRACTICES IN FIVE STATES

	CALIFORNIA (Large Medicaid Program; High Title XX Exp.)	MASSACHUSETTS (High Nursing Home/1,000 Elderly Population High Medicaid Exp.)	NORTH CAROLINA (Low Nursing Home/1,000 Elderly Population)	NEW YORK (Large Medicaid Exp.; Extensive HHA Services)	OKLAHOMA (Low HHA Services; Low Title XX Exp.)
A. DEMAND					
(1) What happens if a Medicare-eligible person needs ICF level care?	Spend down to Medicaid eligibility. If Medicaid covers care services, then ask for denial of coverage through Medicare.	Sometimes placed in higher level of care; otherwise spend down to Medicaid eligibility.	Spend down to Medicaid eligibility. Then go to ICFs.	Spend down to Medicaid eligibility.	Spend down to Medicaid eligibility.
(2) Are Medicaid-eligible people in need of both HHA and homemaker services put in ICFs instead?	Title XX provides enough Homemaker services that the combination is not a problem. There is no cap on the level of funding for Homemaker services.	Infrequently admitted to hospitals or to nursing homes as "social admissions".	Never put in ICFs unless certified as medically needy. May go into state-administered rest home program and receive home health care there.	There are enough Title XX and HHA services to cover these people. Also have Personal Care Services funded by Medicaid with a substantial case load.	Can receive adequate Title XX and Medicaid Non-Technical Medical Assistance (personal care services). Occasionally placed in ICFs.
B. UTILIZATION					
(1) What happens to Medicaid-eligible patients in need of ICF if no ICF beds are available?	Patients would be put in hospital or SNF beds under category of Administrative Care Days. In November 1978, 9,679 such stays occurred.	Would stay in acute care hospital until beds became available.	Supply not a constraint. Because utilization review process is very strict, patients who no longer need nursing home care do not take up the beds.	HRF (same as ICF) supply is adequate to meet needs.	The number of ICF beds is adequate to meet needs. No shortage of ICFs, and no waiting lists.
(2) What happens to Medicaid eligible patients in need of SNF level care if no SNF beds are available?	Administrative Days in acute care hospitals are authorized. In November 1978, 1,274 authorizations were made. These patients would <u>not</u> be put into ICFs.	Would stay in hospital under category of Administratively Necessary Days. Recent legislation has set a cap on the Medicaid reimbursement of \$70 per Administrative Necessary Day. These patients would <u>not</u> be put into ICFs.	Enough SNF beds available because the utilization review process is very strict.	These patients are put into acute care hospitals under the "Alternate Care Days" system or get HHA services. It is possible in some cases to provide Home Health Services for these patients under New York's Long Term Care-Home Health Care Program. This program provides services covered by Medicare and Medicaid that are usually not provided by HHAs. These patients are <u>not</u> put into HRFs.	Although there are no Medicaid-certified SNF beds in the state, half of the ICF beds meet the staffing requirements for SNFs. The difference is that there are not enough RNS to provide skilled nursing care.

TABLE 1 (continued)

MEDICARE AND MEDICAID LTC PLACEMENT PRACTICES IN FIVE STATES

	CALIFORNIA (Large Medicaid Program; High Title XX Exp.)	MASSACHUSETTS (High Nursing Home/1,000 Elderly Population High Medicaid Exp.)	NORTH CAROLINA (Low Nursing Home/1,000 Elderly Population)	NEW YORK (Large Medicaid Exp.; Extensive HHA Services)	OKLAHOMA (Low HHA Services; Low Title XX Exp.)
(3) What happens to Medicare eligible patients in need of SNF level care if no SNF beds are available?	Same as for Medicaid patients. However, the use of Adminis- trative Medicare days in acute care hospitals is 4 times greater than their use in the Medicaid program.	Would stay in hospital under "medically neces- sary days awaiting placement".	Enough SNF beds available due to frequent utiliza- tion review.	Patients remain in hospital and their stays are classified as administrative care days.	No problem with placement. All SNF beds in Oklahoma are Medicare or private pay beds.
(4) What happens to Medicaid eligible patients in need of home health care if no HHA services available?	Information not available.	Some would be put into ICFs or into acute care hospitals as social admissions.	Would be put into rest homes and receive HHA services there. The rest home program is state administered, and every county is required to participate.	HHA services are adequate to provide care to those in need. These services are used as an alter- native to both skilled and interme- diate NH care.	Medicaid doesn't pay for HHA services but the state does in some cases. Some of these patients would go into nursing homes, especially since the large number of proprietary facilities encourages patients to receive a higher level of care than is necessary.
(5) What happens to Medicare eligible patients in need of home health care if no HHA services avail- able?	Information not available.	Same as for Medicaid patients.	State has rest home pro- gram, and the home is considered to be the legal residence of the people living there. Patients can thus receive HH services while at these homes.	Not a problem because HHA services are readily available.	HHA services are only available in some counties. A few of these patients would go into nursing homes.

TABLE 1 (continued)

MEDICARE AND MEDICAID LTC PLACEMENT PRACTICES IN FIVE STATES

	CALIFORNIA (Large Medicaid Program; High Title XX Exp.)	MASSACHUSETTS (High Nursing Home/1,000 Elderly Population High Medicaid Exp.)	NORTH CAROLINA (Low Nursing Home/1,000 Elderly Population)	NEW YORK (Large Medicaid Exp.; Extensive HHA Services)	OKLAHOMA (Low HHA Services; Low Title XX Exp.)
(6) What happens to Title XX eligible patients if Title XX services not available?	Title XX services are available. There is no cap on the level of Homemaker Services funding.	Have Personal Care Services funded by Medicaid. If Personal Care Services not available, patient would not receive services.	The state has a Rest Home Program and patients can be placed in these homes if Title XX services are not available.	Have Personal Care Services funded by Medicaid. If the supply of such services is not adequate, patient would receive no services.	Title XX services are administered in every county. If these services are for some reason unavailable, the patient is placed in an ICF. Also have Personal Care Services funded by Medicaid. This is an exten- sive program in Oklahoma and the services are in adequate supply.
(7) Are there any priority systems for Medicare vs. Medicaid patients needing the same level of care?	Nursing homes prefer Medicare patients.	Nursing homes prefer Medicare patients. It is getting more diffi- cult to place Medicare patients because nursing homes are dropping their SNF certifications.	Nursing homes prefer Medicare patients.	Nursing homes generally prefer Medicare patients. However, a PSRO analyst said that since Medicare and Medicaid reimburse at almost the same rate, some nursing homes prefer to take Medicaid patients.	SNF beds only used for Medicare and private patients. There are no Medicaid-certified SNF beds.
(8) Are there any priority systems for placement of SNF level patients before placement of ICF level patients in SNFs and ICFS?	Would not put SNF person in lower level of care (ICF). SNF patients do not have priority over ICF patients for SNF beds. Data concern- ing Administrative Care Days show that despite the shortage, SNFs are used by ICF patients awaiting ICF placement.	Would not put SNF level patient in ICF bed. SNF patients do not have priority over ICF patients for SNF level beds.	No priority system.	Would not put SNF level patient in ICF bed. SNF patient do not have priority over ICF level patients for SNF level beds.	No shortage of SNFs. No priority systems.
(9) Are there any other factors affecting placement?	Not mentioned.	Expected length of stay has an impact. Accord- ing to the Willemain study, nursing homes prefer patients with a shorter expected length	Not mentioned.	Not mentioned.	Not mentioned.

enough to allow borderline patients to be designated as requiring an SNF placement. In the other four states we studied, officials cited the strict Medicare requirements and said that they followed these federal mandates. According to these officials, those Medicare-eligible, ICF level patients who were not Medicaid eligible would go into nursing homes as ICF private patients or stay in acute care hospitals until they spent down to Medicaid eligibility. Those who were Medicaid eligible would be placed in ICF beds and be covered by Medicaid.

2. Are Medicaid people in need of both HHA and Homemaker Services put into ICFs?

The research literature suggests that many nursing home patients receiving ICF level care do not need such care. The Ohio Demonstration Project, for example, found that six percent of the Medicaid patients in ICFs could have remained in the community if a combination of medical and non-medical services were available.^{1/} Other studies have found that between 10-60 percent of ICF level patients could have remained in the community (see Attachment C-1).

The frequency with which ICF beds are used instead of non-institutional services seems to depend upon the availability of beds and the rigidity of utilization review standards. Massachusetts, with its high nursing home beds per 1,000 elderly would allow such social admissions. In contrast, North Carolina uses its strict utilization review procedures to prevent such placements.

Additional factors would be the availability of state-funded rest homes (e.g., North Carolina) and the state's use of the Medicaid Personal Care Services option. Only fourteen states^{2/} have taken advantage of the Medicaid regulations allowing reimbursement for health-related services, maintenance, household duties, and assistance in activities of daily living. Medicaid funding of these Personal Care Services could be included in the model if data on the services are available. In

^{1/} Joseph M. Davis, Ph.D., et. al., Improving Ohio's Medicaid Long-Term Care Program, Federation for Community Planning, Cleveland, Ohio, May, 1979

^{2/} Arizona, Arkansas, District of Columbia, Massachusetts, Minnesota, Montana, Nebraska, Nevada, New Hampshire, New York, Oklahoma, South Dakota, Texas, and Wisconsin.

Oklahoma, these Personal Care Services, called the Non-Technical Medical Assistance program, are fairly extensive and, when used in combination with Title XX services, help prevent some people from being placed in ICFs.

B. Utilization Issues - Assignment of Excess Demand to Available Services

1. What happens to Medicaid ICF level patients if ICFs are not available?

The state survey results show that in states where there are ICF bed shortages, hospital patients are either put in SNFs or kept in acute care hospitals. In the states we contacted, patients who are at home are rarely placed in a hospital, unless there is a medical emergency.

The days when a patient is awaiting placement are designated as either administrative care, administratively necessary, or alternate care days. When reviewing these cases, PSROs follow state policies regarding administrative care days. In some states (e.g., Massachusetts) a cap is set on the Medicaid reimbursement rate to hospitals for administratively necessary days to encourage hospitals to try to place these patients. Some states put a limit on the number of administrative days covered. Others require that a certain number of nursing home placement calls be made by the discharge planners before Medicaid reimbursement is continued.^{1/} The Medicaid program also reimburses for administrative care days if there are no non-institutional services (HHA) available. Each state sets its own criteria for determining whether non-institutional services are available.

2. What happens to Medicare and Medicaid SNF patients if no SNFs available?

In the states where there are shortages of SNFs, hospital patients requiring SNF level care are generally placed in acute care hospitals. Patients at home generally remain at home while awaiting placement. The PSROs will certify Medicaid or Medicare reimbursement for these medically necessary days and will also allow a 1-3 day "grace period" for patients who no longer need medical services or who refuse to accept an available nursing home bed.

^{1/} Communication with Tom Fallone, PSRO branch, Division of Program Operations, HCFA.

In New York State, some SNF and HRF^{1/} level patients may be provided HHA services under the state's HHA long term care program. However, in September 1980, there were only 325 Medicaid and Medicare people enrolled in this state-wide program. In addition to the standard HHA services, the program provides for Medicaid and Medicare-reimbursable Personal Care Services, respiratory therapy, homemaker services, housekeeper services, and audiology.

3. What happens to Medicare and Medicaid patients needing home health care if there is an inadequate supply of HHA services?

In states with a shortage of HHA services, these patients would either receive no services or would be admitted to nursing homes. Although we could get no estimates of the frequency of these misplacements, the research literature suggests that between 10-60 percent of the institutionalized long term care population do not require institutionalization. In states with a larger supply of ICF beds, (e.g., Massachusetts) HHA level patients may be put into ICFs instead.

4. What happens to persons needing non-institutionalized services who are eligible for Title XX if Title XX services are not available?

In the states with an inadequate supply of Title XX services, individuals either receive Personal Care Services funded by Medicaid or find services in other state programs. If these alternatives are not available, then the individuals usually do not get services. Oklahoma officials said such individuals may also be placed in ICF beds, yet this does not happen often. North Carolina has a state rest home program in which people are placed if Title XX is not available. The availability of Title XX services depends to a large degree on whether there is a cap on expenditures for homemaker chore services. Since California has no such cap, individuals in that state can generally find the Title XX services they need.

5. Are there Priority Systems for Medicare vs. Medicaid patients needing the same level of nursing home care?

Our state survey suggest that nursing homes prefer private patients over Medicare patients, and Medicare patients over Medicaid patients.

^{1/} New York State's Health Related Facilities (HRFs) are equivalent to ICFs.

All of the state officials said that Medicare recipients were easier to place than Medicaid patients. The nursing homes try to balance the need to fill beds and their preference for Medicare and private pay patients. Many nursing homes will deny placement to a Medicaid patient, leaving a bed empty for a few days while waiting for a Medicare or private pay patient.

These results are in agreement with the research literature. A University Health Policy Consortium study found that, among patients who had been in hospitals before going to nursing homes, the average waiting period for nursing home placement was six times longer for Medicaid than for non-Medicaid patients. A 1976 study of inappropriate hospital stays by public patients in two Washington, D.C. hospitals^{1/} and a study by the Ohio Hospital Association^{2/} both identified a reluctance to accepting Medicare patients when there is a possibility that Medicaid will assume coverage after Medicare benefits expire. The Washington, D.C. study found that of the inappropriate stay patients in the two hospitals, 40.9 percent of the Medicare patients were eventually discharged to nursing homes, while only 6.0 percent of the Medicaid patients went to nursing homes. An analysis of facility waiting lists for 1975 in six Pennsylvania counties^{3/} found a similar practice on the part of nursing home administrators of not accepting Medicaid patients. More details on these studies are given in Appendix A.

6. Are there priority systems for placing SNF level patients before placing ICF level patients?

SNF patients are not put in ICF beds and would not have priority over ICF patients for these beds. There did not seem to be any practice to reserve SNF beds for SNF patients before using these beds for ICF patients. The statistics on Administrative Days in California show that the SNFs were often used by Medicaid ICF patients awaiting ICF beds, despite the fact that these beds were also sought by SNF patients waiting in hospitals.

1/ National Capital Medical Foundation, Inc. Inappropriate Hospital Stays: 1976, Washington, D.C., September 1977.

2/ Joseph M. Davis, Ph.d., et al. Improving Ohio's Medicaid Long Term Care Program, Cleveland, Ohio, May 1979, p. 8.

3/ Eastern Pennsylvania Comprehensive Health Planning Board; Health Care for the Elderly: A Planning Guide, Pennsylvania, April 24, 1975.

7. Are there any other factors affecting placement?

In Massachusetts, a Brandeis University study of hospital patients awaiting placement in nursing homes found that short term, rehabilitative or cancer patients are easier to place in nursing homes than chronically ill patients.^{1/} In Maryland, a state official in the Licensure and Certification Division said that the same preference for shorter-term patients seemed to affect placement. Because chronic care needs were associated with heavy levels of care, nursing homes preferred to take patients who were likely to be shorter-term residents of the nursing home.

This bias might also exist because chronic patients are more likely to use up their Medicare coverage or private funding sources and then become Medicaid recipients.

IV. IMPLICATIONS FOR THE LTC ACTUARIAL MODEL

The research literature and the state survey results are generally consistent and can be used as a basis for LTC model assumptions. The major findings are summarized below.

- While placement patterns vary between states, this variation seems to be primarily due to differences in the availability of specific services. Because the basic placement practices seem to be consistent across states, we can develop a standardized model for all the states.
- Among persons needing nursing home care, preference is given to patients with certain characteristics. Preference is given to private-pay patients over Medicare patients and Medicare patients over Medicaid patients.
- In addition, priority is given to individuals that are likely to have shorter stays. This might be attributable to the fact that they might require more intensive care. In the case of Medicare patients, it might be due to the fact that the individuals are more likely to become covered by Medicaid at a later date, when Medicare benefits have expired.

^{1/} Thomas Willemain and Leonard Gruenberg, "Hospital Patients Awaiting Placement in Long Term Care Facilities," University Health Policy Consortium.

- Patients are rarely placed at a lower level of care than the level they need. The one exception we identified (the New York State HHA long term care program) serves only 325 patients.
- Patients are frequently placed at higher levels of care than needed, if needed services are not available. Persons needing nursing home care frequently are placed in hospitals, if nursing home beds are not available. In addition Medicaid ICF level patients are placed in SNFs and Medicaid HHA-level patients are placed in ICFs.
- Persons eligible for Medicaid or Medicare who cannot get personal care home services or homemaker services under Title XX or are provided ICF services (for persons eligible for Medicaid) or HHA care, when these services are available.

Based upon these general observations and the specific results noted in Section III, we propose to use the following algorithm to place persons requiring SNF, ICF, and HHA services:

- first priority proper placements:
 - Medicare SNF-level patients are placed in SNF beds available for Medicare patients;
 - Medicaid SNF-level patients are placed in SNF beds available to Medicaid patients;
 - Medicaid ICF-level patients are placed in ICF beds;
 - Medicaid ICF/MR-level patients are placed in ICF/MR beds;
 - Medicare HHA-level patients are provided HHA care, as available;
 - Medicaid HHA-level patients are provided HHA care, as available;
 - SSI eligibles needing homemaker/chore services are provided these services, as available.

- placement at higher-than-needed levels (in descending order of priority):
 - Medicaid ICF-level patients are placed in any remaining SNF beds available to Medicaid patients;
 - any Medicare SNF-level and Medicaid ICF-level patients who are in hospitals and could not be placed in nursing homes remain in hospitals as administrative care patients;
 - Medicaid HHA-level patients are placed in any remaining ICF beds;
 - SSI eligibles unable to obtain homemaker/chore services are provided any HHA services available under Medicaid; any remaining demand would be met by placing individuals in any remaining ICF beds.
- all others who have been placed get no LTC services under Medicare or Medicaid.

In this algorithm, a person needing SNF or HHA services who is eligible for both Medicare and Medicaid is treated as a Medicare recipient.

ATTACHMENT C-1

REVIEW OF LITERATURE ON LTC PLACEMENT

The appendix summarizes the research literature on placement of patients needing LTC services under public LTC programs. We found that the studies did not provide data that could be used in the LTC model. Nonetheless, they provided useful qualitative information. Much of the relevant research focuses on misplacement of persons needing LTC services. This appendix includes sections on misplacement in nursing homes, use of noninstitutional care, priority systems for placing patients, and the use of "hospital beds" by patients awaiting LTC placement.

1. Misplacement

Many studies of the placement of people at inappropriate levels of care have been conducted. A 1975 study in New York City, for example, reported that 20 to 25 percent of the city's SNF patients should have been receiving care in health-related facilities (New York's equivalent of an ICF).^{1/} A survey conducted in Monroe County, New York, in 1974-75, revealed that 9.6 percent of the SNF patients and 53.9 percent of the ICF patients were inappropriately placed at too high a level of care.^{2/} Two studies published done in 1979 reached similar conclusions: a 1979 study done by Thomas Willemain showed that 20 percent of Medicaid SNF patients in Massachusetts were inappropriately placed,^{3/} and the Ohio Demonstration Project, which surveyed 27,863 Medicaid patients in nursing homes throughout the state, found that 6.5 percent could have received non-institutional care.^{4/} A 1976

^{1/} John Hess, "Medicaid Help Called Lost on Wrong Care for Aged," New York Times, April 13, 1975.

^{2/} Monroe County Health Council of the Genesee Region Health Planning Council, Survey of the Need for Inpatient Beds in Monroe County: 1974-75, Rochester, New York, May 1975, pp. 32, 40.

^{3/} Thomas Willemain, "Regulatory Response to Variation in the Supply of Nursing Home Beds," Public Policy, Vol. 27, No. 4, Fall 1979.

^{4/} Joseph M. Davis, Ph.D., et al., Improving Ohio's Medicaid Long-Term Care Program, Federation for Community Planning, Cleveland, Ohio, May 1979, p. 8.

survey conducted in New York State found that 27 percent of the state's nursing home patients did not require nursing home services.^{5/}

Several studies showed misplacement to be at a much higher level. A Rhode Island survey of patients at SNFs conducted by Allison-Cooke and Thornberry showed that fewer than half (47.7%) were actually receiving some nursing procedure considered as "skilled".^{6/} Florida State University reported in 1977 that of the 1.1 million individuals who are institutionalized, about 36 percent don't need to be.^{7/} Other estimates of the numbers of people inappropriately institutionalized range from 10 to 60 percent of the institutionalized long term care population.^{8/}

2. Alternative Care

A growing body of evidence suggests that the provision of adequate alternatives would result in many people who are currently institutionalized being cared for outside of nursing homes. In 1977 the Congressional Budget Office estimated that 20 to 40 percent of the nursing home population could be cared for at less intensive levels if adequate community-based care were provided. This would significantly change the present distribution of the elderly and disabled among the levels of care. According to the report, the current situation, in which many disabled persons receive no long term care, is a consequence of the disproportionate support which nursing home care receives from public programs, with less than 10 percent of public funds being

- ^{5/} David S. Greer and Marilyn T. Kaplan, "Care of the Chronically Ill: Planning for Progress," Rhode Island Medical Journal, Brown University, Providence, Rhode Island, Vol. 59, No. 5, May 1976, pp. 217-217, 238, 241.
- ^{6/} Sherry Allison-Cooke and Helen Thornberry, "Factors Affecting Nursing Home Medical Review," Medical Care, Vol. 40, No. 6, June 1977.
- ^{7/} Barbara Palmer, "More Elderly Seeking Alternatives to Nursing Homes," Washington Star, November 9, 1977.
- ^{8/} A Congressional Budget Office issue paper on Long Term Care for the Elderly and Disabled (February 1977, p. 18) concludes that 10 to 20% of SNF patients and 20 to 40% of ICF patients are misplaced and are receiving unnecessarily high levels of care. The Wall Street Journal reported in an April 4, 1975 article entitled "Alternatives to Nursing Homes" by Joan S. Lublin that according to several studies, as many as 40% of the elderly in nursing homes don't truly need round-the-clock nursing services. Likewise, Tom Joe and Judith Meltzer reported in an article on "Policies and Strategies for LTC" that estimates of the numbers of persons inappropriately institutionalized vary from 15-60% of the institutionalized long term care population".

used for home-based services.^{9/} Also in 1977, the St. Camillus Health and Rehabilitation Center (Syracuse, New York), a provider of home health care, reported that 66 percent of its patients met New York State's criteria for SNF placement and 30 percent met the criteria for HRF placement.^{10/} Similarly, Albert Skellie reported that when community-based care was provided to a group of patients (the service group), 85 percent of that group was living in the community at the end of six months, as opposed to 70 percent of the group which did not receive care (the control group). At that time, only 8 percent of the service group was still in nursing homes, compared to 13 percent of the control group.^{11/}

3. Patients in Hospitals Awaiting Long Term Care Placement

A study done by the National Capital Medical Foundation, Inc. entitled Inappropriate Hospital Stays reported that in 1976 10 percent of the 5,000 acute care beds in Washington, D.C. were occupied by non-acute patients awaiting placement in a long-term care facility. The average wait for a Medicaid patient was 9-12 months, and the annual cost for the Medicaid patients alone was more than \$18 million. The total for Medicare and Medicaid was \$36.5 million.^{12/}

A one-day survey of administrative care days conducted by the Genesee Region PSRO (New York) on February 28, 1980, found that 7.84 percent of the patients in acute care hospitals were waiting for nursing home placement. When broken down further, the figures show that fewer than 2 percent of the private patients were awaiting placement as compared with 8 percent of the Medicare patients and 45 percent of the Medicaid patients.^{13/}

^{9/} Congressional Budget Office, Long Term Care for the Elderly and Disabled, February 1977, pp. 14, 17, 18.

^{10/} Eleanor M. Fiumano and Agnes B. Orr, Health Care By The Day: The Medically-Oriented Alternative to Institutionalization, St. Camillus Health and Rehabilitation Center, Syracuse, New York, 1977.

^{11/} Albert F. Skellie, The Impact of Alternatives to Nursing Home Care, Atlanta, 1978.

^{12/} National Capital Medical Foundation, Inc., Inappropriate Hospital Stays: 1976, Washington, D.C., September 1977.

^{13/} Genesee Region PSRO, Inc., One Day Survey of Long Term Care Facilities (SNFs and HRFs) in Livingston, Monroe, Ontario, Seneca, Steuben, Wayne, and Yates Counties on Midnight, February 28, 1980, Rochester, New York, 1980.

4. Priority Systems

Several studies have been conducted which bear out theories that nursing homes use priority systems to determine which patients they will admit in case of a shortage of beds. These priorities are tied to factors such as source of payment and length of stay.

Thomas Willemain at the Kennedy School of Government is completing a study of 675 patients in Massachusetts acute care hospitals awaiting placement in nursing homes on a given day in 1976. The study classifies the patients by the ease of placing them. It concludes that:

- Short-term rehabilitation or cancer patients are easier to place in nursing homes than chronically ill patients. Nursing homes do not want to take permanent placements for long-term chronically ill patients. Two reasons for this bias are that chronic patients often require a high level of care, and they are more likely to use up their higher reimbursement Medicare funding. If they then become eligible for Medicaid, the nursing home receives a lower reimbursement rate.
- Medicaid patients are more difficult to place than non-Medicaid patients. Among the patients who were in the hospital between nursing home stays, Medicaid patients waited six times longer for placement than non-Medicaid patients. Among those admitted to the hospital from home, Medicaid patients waited twice as long as non-Medicaid patients. The non-Medicaid patients were predominantly private pay patients, since Medicare accounts for only 1.5 percent of the LTC patient days in Massachusetts.^{14/}

Other studies confirm these findings. The New York State Moreland Act Commission investigation into nursing homes observed that many facilities attempt to accept only the relatively well and the private pay applicants, making it difficult for Medicaid-supported and highly impaired applicants to find a vacant bed.^{15/} An analysis of facility waiting lists in six counties in Pennsylvania in 1975 counted 2,066 individuals seeking nursing home care. The authors of this study identified a concerted effort on the part of nursing home administrators to reject Medicaid patients from these lists. The longest waiting lists were at county facilities which were the major suppliers of nursing home beds for the indigent. Hospital administrators responded during

^{14/} Thomas Willemain and Leonard Gruenberg, Unpublished Study on Hospital Patients Awaiting Placement in Long Term Care Facilities.

^{15/} Report of the New York State Moreland Act Commission on Nursing Homes and Residential Facilities, Long Term Care Regulation: Past Lapses, Future Prospects, A Summary Report, April 1976, p. 27.

the survey that many of their patients would have been better served in a nursing home, but could not gain admittance because they were subsidized by Medicaid.^{16/}

The 1976 Washington, D.C. study, Inappropriate Hospital Stays, cited previously in this appendix, also identified a resistance to accepting Medicare patients when there is a possibility that Medicaid would assume coverage after Medicare benefits are terminated. Of the two hospitals studied, one hospital appeared to be more the successful in placing its Medicare patients in nursing homes, in part because they had a higher socioeconomic status than the Medicare patients in the other hospital. Private nursing homes were more likely to accept the former hospital's patients because they appeared to be capable of paying for their care after their Medicare benefits expired.^{17/}

Any similar reluctance on the part of nursing homes to admit private pay patients who may eventually become eligible for Medicaid benefits is significant when viewed in light of a 1979 study done in Monroe County, New York. The authors found that 40 percent of the privately admitted nursing home patients in the area had exhausted their own funds within six months after admission and become eligible for Medicaid.^{18/}

^{16/} Eastern Pennsylvania Comprehensive Health Planning Board, Health Care for the Elderly: A Planning Guide for the Nursing Home System in Berks, Carbon, Lehigh, Monroe, Northampton, and Schuylkill Counties, Pennsylvania, April 24, 1975, p. XVIII.

^{17/} National Capital Medical Foundation, Inc., Inappropriate Hospital Stays: 1976, p. 61.

^{18/} Gerald M. Eggert and Joyce E. Bowlyow, "Preliminary Findings: Monroe County's ACCESS Project to Prevent Unneeded Nursing Home Admission," Perspectives on Medicaid and Medicare Management, September 1979.

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ATTACHMENT C-2

<u>STATE</u>	<u>HOME HEALTH EXPENDITURES PER ELDERLY</u>
New York	58.13
Mississippi	38.27
Vermont	36.58
District of Columbia	33.37
Florida	29.86
Maine	25.34
Louisiana	24.97
Massachusetts	23.64
Rhode Island	21.57
Alabama	20.23
New Mexico	18.99
New Jersey	17.39
New Hampshire	16.97
Pennsylvania	16.69
South Carolina	16.67
Connecticut	15.91
Texas	15.72
Missouri	14.91
Idaho	14.77
Tennessee	14.54
California	13.51
Kentucky	13.19
North Carolina	13.11
Maryland	12.78
Delaware	12.49
Colorado	12.46
Oregon	12.01
Nevada	11.89
Hawaii	11.74
Illinois	11.54
Washington	11.45
Arizona	9.78
Wisconsin	9.64
Ohio	9.45
Wyoming	9.28
Minnesota	8.40
Montana	8.36
Virginia	8.34
Michigan	7.41
West Virginia	7.33
Georgia	7.07
Nebraska	6.44
Utah	5.78
Indiana	4.59
Kansas	3.44
Arkansas	3.43
Iowa	2.76
Oklahoma	2.71
Alaska	2.06
North Dakota	1.71
South Dakota	1.52
MEAN:	14.32
ST. DEV.	10.64

Includes:

Medicare Part A and Part B
Medicaid Expenditures

Figures are adjusted for cost of living differences in each state.

<u>STATE</u>	<u>NURSING BEDS PER 1,000 ELDERLY</u>
Nebraska	108.25
Colorado	94.11
Wisconsin	90.12
Minnesota	81.52
Alaska	76.67
Texas	74.52
Oklahoma	73.02
South Dakota	72.53
Iowa	71.44
Washington	70.51
North Dakota	70.11
Kansas	68.41
Georgia	65.87
Arkansas	63.42
Illinois	62.85
New Hampshire	62.30
Montana	61.03
Michigan	60.93
Connecticut	59.80
Indiana	57.89
Massachusetts	57.24
Vermont	55.92
Ohio	52.97
Louisiana	51.14
Rhode Island	50.93
California	50.52
Maine	50.49
Idaho	49.15
Oregon	48.05
Maryland	47.27
Missouri	46.43
Wyoming	45.47
Alabama	45.12
Virginia	44.98
Hawaii	42.05
Utah	42.03
Pennsylvania	41.23
Tennessee	40.59
New York	37.12
Kentucky	36.66
New Jersey	36.65
Delaware	36.50
South Carolina	34.08
Mississippi	32.75
District of Columbia	31.85
Nevada	29.13
New Mexico	25.94
North Carolina	25.77
Arizona	22.99
Florida	20.99
West Virginia	20.42
MEAN:	52.90
ST. DEV.	19.37

SOURCE: Health Resources Statistics: Health Manpower and
Health Facilities, 1976-77.

<u>STATE</u>	<u>TITLE XX EXPENDITURES PER ELDERLY</u>
Minnesota	80.15
Hawaii	69.71
California	62.78
South Carolina	55.61
Louisiana	53.46
Kansas	51.40
Idaho	44.65
Colorado	43.29
North Dakota	42.13
Texas	41.92
Wisconsin	40.10
District of Columbia	39.54
Washington	39.26
New Mexico	39.18
North Carolina	35.87
Montana	35.65
Arkansas	33.37
Nevada	33.10
Nebraska	32.61
Massachusetts	32.58
Delaware	31.96
Maine	30.04
Iowa	29.07
Vermont	28.50
Alaska	26.77
Virginia	26.48
Wyoming	23.91
New Hampshire	23.33
Connecticut	22.98
Ohio	21.47
Georgia	21.08
Tennessee	21.00
Oregon	19.35
Illinois	14.99
West Virginia	14.06
Mississippi	12.04
Alabama	11.89
South Dakota	10.76
Missouri	9.75
Florida	9.16
New York	8.60
New Jersey	7.69
Michigan	4.71
Pennsylvania	4.69
Utah	4.47
Indiana	3.04
Kentucky	2.24
Oklahoma	1.74
Arizona	0.21
Maryland	0.0
Rhode Island	0.0
MEAN:	26.52
ST. DEV.	19.02

Based on Title XX Expenditure Data from
FY 1976 - Social Services USA, adjusted for
cost-of-living differences.

Long Term Care services included:

- chore services
- adult day care
- adult foster care
- home delivered/congregate meals
- homemaker services
- residential care and treatment
- special services for the disabled
- transportation

APPENDIX D

SUMMARY OF AN ECONOMETRIC
ANALYSIS OF NURSING HOME SUPPLY

APPENDIX D

SUMMARY OF AN ECONOMETRIC ANALYSIS OF NURSING HOME SUPPLY

A. INTRODUCTION

In our initial formulation of the Long-Term Care Model, it was proposed that econometric equations be estimated to forecast the supply of Medicare SNF and Medicaid SNF and ICF Services. Use of these equations would give the Model the capability of predicting how changes in reimbursement would affect the supply of nursing home services. We found that this approach could not be used, because of lack of suitable data to test how the profitability of providing institutional care under Medicare and Medicaid varies with reimbursement. This Appendix summarizes our attempt to develop econometric equations that would be suitable for forecasting SNF and ICF supply to the Medicare and Medicaid Programs.

B. MEASURES OF SUPPLY

We considered two measures of supply of institutional services for use as the dependent variable. The measures considered for use were:

- certified beds - the number of beds certified as Medicare or Medicaid beds. This data is available from the Master Facilities Inventory conducted by the National Center for Health Statistics and from the provider of services files maintained by HCFA.
- available patient days - the Medicare and Medicaid programs collect data on the number of days used by public patients in SNF's and ICF's. This data is available from HCFA in published form.

The former measure, number of certified beds, was rejected for two reasons. First, certified beds can be used by private patients and can be dually certified for the two programs or services. Therefore, it is not a true measure of supply.

The second measure of supply is only appropriate for use as the dependent variable if all of the available days are used by Medicare and Medicaid patients. In other words, supply in a state must constrain demand so that there is greater demand than supply. Evidence to support this assumption was found from several sources.¹ In those states where data indicated that supply may not be constraining, we contacted individuals at the State Health Planning Agencies. We contacted five states (Alabama, Colorado, Indiana, Nebraska, and Oklahoma), and found that in all states but Colorado and Nebraska, there was evidence to indicate that supply was constraining statewide. The results of our investigation of all states is reported in Appendix C. Therefore, the second measure was chosen for use as the dependent variable.

¹ These sources were:

Conversations with Susan Harris, American Health Care Association
William Scanlon, Nursing Home Utilization Patterns: Implications for Policy, The Urban Institute, 1980.

William Scanlon, Aspects of the Nursing Home Market, Private, Demand, Total Utilization and Investment, The Urban Institute, 1978.

C. SPECIFICATION OF THE REGRESSIONS

Several functional forms were tested for use in the regressions including:

- linear form - supply as a linear function of independent variables,
- log form - supply as a log-linear function of independent variables,
- difference form - use of the form attempted to explain differences in supply from one year to the next in terms of changes in the independent variables. This was used to reduce the impact of variables that differ across states, but not much over time, such as health planning policies.
- percent change - this form utilized an equation which specified the percent change in supply as a function of the percent change in the independent variable. This form was used to eliminate scale differences inherent in the size of the state but not explained by the independent variables.

Separate equations were estimated for the supply of Medicare SNF, Medicaid SNF, and Medicaid ICF services. In addition, we tried combined Medicaid SNF and ICF supply because the distinction between the two varied significantly across states.

Several independent variables were considered for use in these equations.

These variables, and the reasons for their use are described below.

- price variables - The supply of goods and services is dependent on the price paid for the good or service. Usually, more is supplied as the price of the good increases. The price paid to nursing homes for services provided to public patients is the reimbursement per day of service. Variables used were Medicare SNF reimbursement per day, Medicaid SNF reimbursement per day, and Medicaid ICF reimbursement per day. We would expect the relationship between reimbursement and supply of the same service to be positive. This variable was adjusted for cost of living differences across states by dividing by per capita income in that state and by the GNP deflator.
- profit variables - The supply of goods and services could be expected to be greater if the potential profit generated by providing the service is greater. For example, if SNF reimbursement allows greater profit than ICF reimbursement, we would expect to see a greater supply of SNF services than of ICF services. If greater

profit can be achieved from serving private patients, we would expect to see less services supplied to public patients. Several variables were chosen to be proxies for a profit variable including:

- Medicare charges per day - Medicare does not pay SNF's the full charges paid by private patients for SNF care. However, it does collect data on total charges for services received by Medicare patients. This data is the closest approximation available to the revenues SNFs could earn by treating private patients, and was chosen to represent private charges. We would expect, all else being equal, that private charges would have a negative relationship to public supply. This variable was also adjusted for cost of living differences across states by dividing by per capita income and the GNP deflator.
- cost savings incentive dummy - In some states Medicaid allows nursing homes to earn higher profits if their costs are lower than average. A dummy variable was used to represent the twenty-four states which allow such profits.² We expected that if the state allows such profits, supply to Medicaid patients will be greater.
- demand variables - We would expect that overall supply, and therefore supply to public patients, to be greater if the population is expected to demand more long term care services because of:
 - greater proportion of people over 65 - The older the population in the state, the greater the demand for long-term care. This variable was expressed in two ways; the actual number of people over 65, and the proportion of people over 65 in the state.
 - greater proportion of people over 85 - People over 85 are the greatest users of nursing home services. This variable was expressed both in actual number of people over 85, and as the percent of people 85 and over of the total elderly population.
 - per capita income - In addition, income is expected to play a role in the demand for long-term care services. The direction of the relationship is unclear. Higher income could mean that there will be more private patients demanding care and therefore less supply to public patients. Similarly, a higher income could mean that more people are able to afford home care, thus avoiding institutionalization. This would cause a greater supply to public patients, all else equal.

² Data from the American Health Care Association, How Medicaid Pays for Long Term Care: A Survey of State Medicaid Payment Methods for Nursing Homes, 1978 AHCA publication.

Several other demand variables were used to test the validity of the assumption that supply is independent of demand. Variables used to test this hypothesis were:

- medically needy level - The higher the medically needy level, the greater the demand by public patients.
- coverage of medically needy groups - Several states have medically needy programs, but do not cover long term care services for this group. If coverage is not available, we would expect demand to be less.
- 209b states - Some states use categorical income levels which are more restrictive than the federal SSI level. In these states, we would expect less demand by public patients.
- other relevant variables - Many other variables were considered for use in the supply equations. These were:
 - supply of nurses - We would expect that, all else equal, if the supply of nurses was greater, the greater the supply of nursing home services. Therefore, we used the supply of full time equivalent (FTE) nurses (LPN & RN) as an explanatory variable.³
 - hospital backup - The number of people awaiting placement in nursing homes is an indication that supply is not great enough to meet demand. We would expect that if the backup is large, supply would be small.⁴
 - home health reimbursement - We would expect that as reimbursement for home health services increased, supply of home health services would increase. Therefore, fewer people would seek nursing home services and the supply would be lower.

³ Data from Second Report to the Congress, March 15, 1979 (Revised): Nurse Training Act of 1975, DHHS, PHS, Health Resources Administration, March 1979.

⁴ Data from HCFA tables, "Number of Discharges, Total Days, and Mean Length of Stay", the percent of patients with stays longer than 29 days was used as a proxy for hospital backup.

- geographical differences - Differences in supply could be attributed to geographical differences. Therefore, we used two dummy variables, one for the Northeast, which we expected to be positive, and one for the south, which we expected to be negative. This was based upon a review of the error plots from early regressions.⁵
- case mix - Telephone calls to states revealed that nursing homes preferred patients who had less complicated illnesses. These patients are both more profitable and less likely to become Medicaid patients. A study of the data revealed that there was a positive relationship between the number of people awaiting nursing home placement and the average length of stay. Therefore, in our regressions we included a variable to represent case mix, using average length of stay. We expected this variable to be negatively related to nursing home supply.⁶

These equations were run using cross-sectional data for 1977, using 1977 and 1978 data for difference equations, and using time series data from 1975 to 1978.

D. RESULTS OF SUPPLY EQUATION REGRESSIONS

Tables 1 through 3 summarize the results of the supply equations with the best explanatory power. All of the variables described above were used in other equations not presented here. Presented in this section is a summary of our findings.

Use of the regressions led to the following results:

- price variables - The price variables were frequently significant in all three equations. However, in most cases the sign was not in the expected direction.
- profit variables - Medicare charges per day was significant in equations with Medicare days as the dependent variable. It was not significant for Medicaid equations. The cost incentive dummy was not significant in Medicaid equations.

⁵ States were classified using Census regions corresponding to regional areas defined by HCFA.

⁶ Data used was Medicare and Medicaid data on average length of stay.

TABLE 1

EQUATIONS TO ESTIMATE MEDICAID SNF SUPPLY LOG FUNCTION¹

<u>Variable</u>	<u>Expected Sign</u>	<u>Actual Sign</u>
Medicaid Reimbursement/Day-SNF* ²	+	-
Medicaid Reimbursement/Day-ICF* ²	-	+
Population 85 and Over	+	-
Cost Incentive Dummy	+	+
FTE Nurses in State*	+	+

$R^2 = .53$ Standard Error = 1.508

* = Significant variable.

¹ Equation estimated using one year's data. Dependent variable is total Medicaid SNF days.

² Adjusted for variations in state cost of living by dividing by state per capita income.

TABLE 2

EQUATIONS TO ESTIMATE MEDICAID
ICF SUPPLY LOG FUNCTION¹

<u>Variable</u>	<u>Expected Sign</u>	<u>Actual Sign</u>
Medicaid SNF \$/Day* ²	-	+
Medicaid ICF \$/Day* ²	+	-
Population 85 and Over*	+	+
Cost Incentive Dummy	+	+
FTE Nurses	+	-

$R^2 = .73$ Standard Error = .635

* = Significant variable

¹ Equation estimated using one year's data. Dependent variable is total Medicaid ICF days.

² Adjusted for cost of living differences by dividing by state per capita income.

TABLE 3
EQUATIONS TO ESTIMATE MEDICARE SNF
SUPPLY LOG FUNCTION¹

<u>Variable</u>	<u>Expected Sign</u>	<u>Actual Sign</u>
Medicare SNF \$/Day ²	+	+
Medicaid SNF \$/Day ²	-	+
Medicaid ICF \$/Day ²	-	+
Medicare Charges/Day ²	-	-
Population 75 and Over*	+	+
Medicare Home Health \$/Visit	-	-
Medicaid Home Health \$/Recipient ²	-	+

$R^2 = .83$ Standard Error = .56

* = Significant variable.

¹ Equation estimated using one year's data. Dependent variable is total Medicare SNF days.

² Adjusted for cost of living differences by dividing by state per capita income.

- demand variables - Population was the variable which was found to be most significant in all regressions, and was found to have a positive sign. Per capita income was occasionally significant. The other demand variables were rarely significant which supports our assumption that utilization is independent of demand.
- other variables - Other variables found to be significant were the dummy variables for northeast and south, full time equivalent nurses, and the average length of stay variable.

In general, we found that similar results were achieved when cross-section and time series data was used. The same variables were consistently significant, although use of time series data decreased the R^2 slightly and increased the

Durbin Watson Statistic. The equations frequently had a high degree of explanatory power, but the errors were too large to be useful for forecasting purposes. Equations were also estimated for Medicaid SNF and ICF combined. These equations produced satisfactory results, but no satisfactory method could be found to forecast the proportion of beds available for each service.

Our findings eventually led us to reject the regression approach. We felt the use of regressions was inadequate for two reasons. First, the relationship between reimbursement and supply was frequently negative. Second the standard errors were too large to produce equations useful for forecasting purposes.

These problems can be attributed to several things including:

- no adequate variable for use as a profit variable - There was no appropriate data for use as a profit variable for the care of public patients. Supply of services is not dependent only upon price, but upon the amount of profit resulting from supply of that service.
- significant state differences not captured by variables - There are significant differences among states which cannot be captured using available data. Every state has different practices regarding nursing home reimbursement, placement, and distributions between SNF and ICF beds. For example, Oklahoma has very little SNF supply because of a strict adherence to Medicare standards of placement in SNFs. The distribution of SNF and ICF beds in a state is sensitive to placement patterns and reimbursement levels. All of these differences could not be captured.

APPENDIX E

BASE CASE PROJECTIONS:

NATIONAL ESTIMATES AND STATE ESTIMATES
FOR SELECTED YEARS, 1977-1990

MEDICAID AND MEDICARE SUMMARY TABLES

MEDICAID

LIC SUMMARY: RECIPIENTS

YEAR	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
1977	629628.	747829.	330557.	100905.	0.	0.	26243.	1835241.
1978	632260.	733473.	377633.	96032.	0.	0.	48515.	1892864.
1979	635740.	750721.	427435.	99311.	0.	0.	71574.	1985338.
1980	637922.	758068.	485420.	106116.	0.	0.	96892.	2078366.
1981	640084.	762683.	551494.	100572.	0.	0.	121444.	2176271.
1982	642139.	766570.	626329.	100985.	0.	0.	144998.	2281016.
1983	644223.	767320.	707056.	101339.	0.	0.	168154.	2388030.
1984	646129.	763640.	792834.	101685.	0.	0.	190619.	2494837.
1985	648289.	762233.	844394.	102354.	0.	0.	215059.	2612263.
1986	650624.	763810.	991322.	103040.	0.	0.	294203.	2802922.
1987	650665.	765809.	1112805.	103844.	0.	0.	399669.	3032708.
1988	650819.	767805.	1245010.	104691.	0.	0.	544620.	3312876.
1989	650869.	768785.	1396920.	105155.	0.	0.	737822.	3659476.
1990	650368.	768785.	1579301.	105705.	0.	0.	991741.	4096316.

LTC SUMMARY: UTILIZATION

MEDICAID

YEAR	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOME MAKER	HOSPITAL
1977	120180412.	163339384.	330646.	100905.	0.	0.	209981.
1978	120647600.	159711164.	377633.	95032.	0.	0.	388121.
1979	121312272.	162166336.	427835.	99311.	0.	0.	572595.
1980	121844992.	163254096.	485420.	109116.	0.	0.	775139.
1981	122320304.	163883184.	551494.	100572.	0.	0.	971553.
1982	122784144.	154390288.	626329.	100985.	0.	0.	1159989.
1983	123232240.	154322112.	707056.	101339.	0.	0.	1345235.
1984	123551952.	163343760.	792834.	101635.	0.	0.	1524959.
1985	124128336.	153031408.	894394.	102354.	0.	0.	1720555.
1986	124644972.	163424528.	991322.	103040.	0.	0.	2353621.
1987	124655392.	153917952.	1112905.	103844.	0.	0.	3197347.
1988	124696300.	164422336.	1255019.	104691.	0.	0.	4356952.
1989	124712640.	164694672.	1396920.	105156.	0.	0.	5902566.
1990	124712624.	164698672.	1579391.	105705.	0.	0.	7933920.

LIC SUMMARY: EXPENDITURES (B1000)

MEDICAID, STATE SHARE

YEAR	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
1977	1239721.	1100010.	82772.	385471.	0.	0.	6702.	2814619.
1978	1401928.	1264590.	101237.	454601.	0.	0.	12231.	3244531.
1979	1604834.	1459133.	123477.	561860.	0.	0.	19716.	3768965.
1980	1843603.	1676908.	153225.	654797.	0.	0.	29425.	4367895.
1981	2118281.	1919145.	190096.	777019.	0.	0.	40547.	5045020.
1982	2424502.	2208334.	234795.	904241.	0.	0.	53082.	5824885.
1983	2759042.	2493355.	287749.	1041573.	0.	0.	67328.	6649987.
1984	3128311.	2805009.	345375.	1198587.	0.	0.	83474.	7551192.
1985	3530198.	3135415.	416477.	1218738.	0.	0.	102579.	8403339.
1986	3955208.	3501206.	501430.	1399406.	0.	0.	154162.	9511350.
1987	4396897.	3885232.	605738.	1590213.	0.	0.	227289.	10705301.
1988	4870244.	4310258.	724657.	1797547.	0.	0.	338329.	12040975.
1989	5374249.	4749344.	809864.	1981869.	0.	0.	495923.	13471206.
1990	5906607.	5224395.	1046847.	2197483.	0.	0.	719323.	15094601.

MEDICAID, FEDERAL SHARE

YEAR	SNF	ICF	HOME HEALTH	ICF/YR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
1977	1458759.	1543326.	87377.	504051.	0.	0.	7947.	3606400.
1978	1625411.	1704544.	105433.	589947.	0.	0.	15328.	4046000.
1979	1859119.	1977240.	130664.	714701.	0.	0.	24667.	4706327.
1980	2131168.	2271162.	167420.	843751.	0.	0.	36934.	5445368.
1981	2446913.	2503719.	207284.	986425.	0.	0.	50935.	6290112.
1982	2801085.	2950217.	252191.	1139687.	0.	0.	66595.	7209716.
1983	3186469.	3331451.	310496.	1313221.	0.	0.	84535.	8226505.
1984	3629149.	3731398.	381351.	1497754.	0.	0.	104765.	9344354.
1985	4094706.	4196135.	461013.	1569884.	0.	0.	128913.	10420598.
1986	4548012.	4632457.	50230.	1727275.	0.	0.	191903.	11765266.
1987	5096912.	5142092.	674263.	2033778.	0.	0.	281663.	13232649.
1988	5643357.	5679068.	81674.	2288845.	0.	0.	416330.	14846251.
1989	6224121.	6255211.	986495.	2507178.	0.	0.	509697.	16583647.
1990	6846611.	6854146.	1197033.	2773714.	0.	0.	881725.	18554928.

LIC SUMMARY: EXPENDITURES (\$1000)

MEDICAID, TOTAL

YEAR	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
1977	2698479.	2648332.	170150.	549523.	0.	0.	14649.	6421071.
1978	3027343.	2773136.	203071.	1056548.	0.	0.	27559.	7290596.
1979	3463958.	3436375.	254142.	1276557.	0.	0.	44384.	8475348.
1980	3974770.	3948976.	315645.	1508544.	0.	0.	66359.	9813334.
1981	4555196.	4522871.	392374.	1763340.	0.	0.	91432.	11335206.
1982	5225548.	5158560.	486936.	2043920.	0.	0.	119677.	13034677.
1983	5945515.	5825222.	599245.	2354791.	0.	0.	151862.	14875581.
1984	6757470.	6536419.	727226.	2686342.	0.	0.	188238.	16895616.
1985	7624919.	7301569.	877494.	2788622.	0.	0.	231497.	18823792.
1986	8543239.	8133679.	1061659.	3192135.	0.	0.	346070.	21276208.
1987	9493829.	9027339.	1283992.	3623992.	0.	0.	508954.	23937408.
1988	10513628.	9989347.	1543342.	4086397.	0.	0.	754661.	26836640.
1989	11598377.	11005571.	1856373.	4469054.	0.	0.	1105619.	30054240.
1990	12753242.	12078559.	2245876.	4971203.	0.	0.	1601043.	33649232.

LTC SUMMARY: RECIPIENTS

MEDICARE

YEAR	SNF	ICF	HOME HEALTH	ICF/HR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
1977	289044.	0.	711609.	0.	0.	0.	1875.	1002527.
1978	269108.	0.	809887.	0.	0.	0.	11154.	1090142.
1979	270194.	0.	896347.	0.	0.	0.	13264.	1179792.
1980	270725.	0.	974550.	0.	0.	0.	15656.	1260909.
1981	270978.	0.	1043800.	0.	0.	0.	18243.	1343001.
1982	271105.	0.	1059847.	0.	0.	0.	20971.	1351904.
1983	271228.	0.	1075489.	0.	0.	0.	23772.	1370469.
1984	271327.	0.	1091470.	0.	0.	0.	26405.	1389179.
1985	271450.	0.	1107772.	0.	0.	0.	29780.	1408980.
1986	271903.	0.	1130032.	0.	0.	0.	46473.	1448443.
1987	272598.	0.	1156179.	0.	0.	0.	67963.	1496715.
1988	272635.	0.	1187446.	0.	0.	0.	95927.	1555983.
1989	272636.	0.	1225204.	0.	0.	0.	132058.	1629877.
1990	272637.	0.	1271205.	0.	0.	0.	178814.	1722631.

MEDICARE

LTC SUMMARY: UTILIZATION

YEAR	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL
1977	9612511.	0.	14657442.	0.	0.	0.	15009.
1978	8894238.	0.	16701554.	0.	0.	0.	89232.
1979	8932267.	0.	18501776.	0.	0.	0.	106112.
1980	8949793.	0.	20131184.	0.	0.	0.	125247.
1981	8957459.	0.	21532608.	0.	0.	0.	145945.
1982	8960956.	0.	21916356.	0.	0.	0.	167767.
1983	8964330.	0.	22242416.	0.	0.	0.	190176.
1984	8967030.	0.	22575888.	0.	0.	0.	211249.
1985	8970298.	0.	22916240.	0.	0.	0.	238239.
1986	8983914.	0.	23382112.	0.	0.	0.	371785.
1987	9000777.	0.	23929884.	0.	0.	0.	543700.
1988	9001727.	0.	24585024.	0.	0.	0.	767419.
1989	9001731.	0.	25375984.	0.	0.	0.	1056468.
1990	9001732.	0.	26339856.	0.	0.	0.	1430511.

MEDICARE

LTC SUMMARY: EXPENDITURES (\$1000)

YEAR	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
1977	308845.	0.	321318.	0.	0.	0.	829.	631492.
1978	307892.	0.	396707.	0.	0.	0.	7049.	711706.
1979	347180.	0.	480249.	0.	0.	0.	9041.	836469.
1980	391865.	0.	580724.	0.	0.	0.	11673.	984265.
1981	440665.	0.	693402.	0.	0.	0.	14823.	1149880.
1982	493303.	0.	784921.	0.	0.	0.	18526.	1297230.
1983	549158.	0.	882003.	0.	0.	0.	22851.	1453995.
1984	608997.	0.	983802.	0.	0.	0.	27654.	1620437.
1985	669973.	0.	1093510.	0.	0.	0.	33848.	1797311.
1986	731449.	0.	1215950.	0.	0.	0.	57045.	2005410.
1987	794323.	0.	1354396.	0.	0.	0.	89580.	2238262.
1988	858506.	0.	1510119.	0.	0.	0.	137022.	2505610.
1989	924477.	0.	1608577.	0.	0.	0.	203815.	2816822.
1990	992914.	0.	1875462.	0.	0.	0.	297309.	3185545.

MEDICAID PROJECTIONS, BY STATE
FOR 1977, 1980, 1985, AND 1990

LTC DEMAND
YEAR: 1977

MEDICAID

STATE	SNF	ICF	HOME HEALTH	ICF/MH	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	3155726.	2551336.	2287.	8300.	0.	0.	0.	5719649.
ALASKA	26394.	15278.	529.	246.	0.	0.	0.	42447.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	892433.	1032612.	11118.	0.	0.	0.	0.	1939162.
CALIFORNIA	15144974.	9049043.	12567.	0.	0.	0.	0.	24206576.
COLORADO	1264680.	594800.	9736.	1906.	0.	0.	0.	1871119.
CONNECTICUT	3104350.	1714903.	28273.	2592.	0.	0.	0.	4850116.
DELAWARE	19023.	95137.	916.	342.	0.	0.	0.	115458.
DIST OF COLUMBIA	65569.	500749.	1536.	494.	0.	0.	0.	568348.
FLORIDA	2946837.	1200203.	9201.	340.	0.	0.	0.	4156580.
GEORGIA	4238916.	722566.	16033.	1917.	0.	0.	0.	4979430.
HAWAII	377252.	361178.	585.	0.	0.	0.	0.	739015.
IDAH0	334722.	164871.	1748.	484.	0.	0.	0.	501824.
ILLINOIS	4014395.	7613142.	30343.	0.	0.	0.	0.	11657870.
INDIANA	1165836.	1919731.	16602.	0.	0.	0.	0.	3102169.
IOWA	32664.	1795968.	13011.	1515.	0.	0.	0.	1843158.
KANSAS	218900.	1473440.	9490.	1902.	0.	0.	0.	1703731.
KENTUCKY	966190.	1296350.	8042.	525.	0.	0.	0.	2271205.
LOUISIANA	270923.	1274819.	17728.	3466.	0.	0.	0.	1566933.
MAINE	85621.	1164011.	4369.	0.	0.	0.	0.	1254000.
MARYLAND	1676134.	1158631.	5019.	0.	0.	0.	0.	2849784.
MASSACHUSETTS	5055292.	4133211.	33047.	4048.	0.	0.	0.	9225637.
MICHIGAN	7003642.	2348952.	15650.	4171.	0.	0.	0.	9372424.
MINNESOTA	4685298.	1947109.	18458.	10040.	0.	0.	0.	6661905.
MISSISSIPPI	1739051.	1090613.	2031.	529.	0.	0.	0.	2842234.
MISSOURI	359338.	1116916.	9032.	1552.	0.	0.	0.	1486838.
MONTANA	414719.	338812.	2558.	262.	0.	0.	0.	756351.
NEBRASKA	198587.	1171760.	5903.	847.	0.	0.	0.	1377101.
NEVADA	233491.	235585.	114.	0.	0.	0.	0.	469190.
NEW HAMPSHIRE	44245.	446978.	5203.	0.	0.	0.	0.	496426.
NEW JERSEY	313897.	2434081.	19239.	0.	0.	0.	0.	2767217.
NEW MEXICO	8774.	195505.	2225.	364.	0.	0.	0.	206868.
NEW YORK	16778524.	10407640.	183775.	16900.	0.	0.	0.	27386912.
NORTH CAROLINA	2001284.	1010017.	4296.	1516.	0.	0.	0.	3022116.
NORTH DAKOTA	622749.	203972.	1135.	0.	0.	0.	0.	827856.
OHIO	6117499.	5662917.	4226.	1809.	0.	0.	0.	11786450.
OKLAHOMA	18519.	2721161.	16797.	1950.	0.	0.	0.	2758427.
OREGON	172825.	893643.	9476.	3196.	0.	0.	0.	1079139.
PENNSYLVANIA	11242587.	6631849.	19477.	14940.	0.	0.	0.	17908832.
RHODE ISLAND	627790.	250246.	8733.	701.	0.	0.	0.	890117.
SOUTH CAROLINA	1288558.	1084650.	1769.	3448.	0.	0.	0.	2375676.
SOUTH DAKOTA	367819.	472983.	3817.	546.	0.	0.	0.	845167.
TENNESSEE	43719.	8058802.	46517.	2671.	0.	0.	0.	8151708.
TEXAS	1586646.	5981123.	59915.	7499.	0.	0.	0.	7635182.
UTAH	460297.	330604.	2687.	505.	0.	0.	0.	794394.
VERMONT	60036.	512573.	2576.	304.	0.	0.	0.	575588.
VIRGINIA	206141.	1474062.	9475.	2980.	0.	0.	0.	1692657.
WASHINGTON	4667546.	2787299.	2291.	630.	0.	0.	0.	7457864.
WEST VIRGINIA	13261.	474781.	3525.	0.	0.	0.	0.	495567.
WISCONSIN	7583436.	4057580.	32779.	3512.	0.	0.	0.	11677706.
WYOMING	11557.	76495.	472.	0.	0.	0.	0.	88524.
NATIONAL TOTAL	113930864.	104264416.	731429.	109330.	0.	0.	0.	219035328.

U.S. SUPPLY
YEAR: 1977

MULTIPLICATION

STATE	SNF (DAYS)	ICF (DAYS)	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER
ALABAMA	3249524.	2064296.	2234.	0.	0.	0.
ALASKA	26416.	100162.	55.	246.	0.	0.
ARIZONA	0.	0.	0.	0.	0.	0.
ARKANSAS	881278.	3836065.	284.	0.	0.	0.
CALIFORNIA	20871246.	1378880.	12340.	0.	0.	0.
COLORADO	1197594.	2005513.	1618.	1906.	0.	0.
CONNECTICUT	3890196.	302038.	52032.	2592.	0.	0.
DELAWARE	15684.	274104.	174.	382.	0.	0.
DIST OF COLUMBIA	63625.	381822.	1889.	494.	0.	0.
FLORIDA	2713717.	2753501.	1081.	340.	0.	0.
GEORGIA	4108035.	2664145.	1295.	1917.	0.	0.
HAWAII	410090.	282160.	580.	0.	0.	0.
IDAH0	304794.	553040.	186.	454.	0.	0.
ILLINOIS	3791373.	13496144.	4744.	0.	0.	0.
INDIANA	1113545.	5828460.	2225.	1027.	0.	0.
IOWA	23248.	5046227.	497.	1515.	0.	0.
KANSAS	211635.	3872042.	432.	1902.	0.	0.
KENTUCKY	902124.	2167457.	4060.	625.	0.	0.
LOUISIANA	327508.	5211227.	1040.	3466.	0.	0.
MAINE	77659.	2053707.	1435.	0.	0.	0.
MARYLAND	1616318.	1895856.	2103.	0.	0.	0.
MASSACHUSETTS	4911634.	6798690.	17193.	4088.	0.	0.
MICHIGAN	6399008.	5185033.	2937.	4170.	0.	0.
MINNESOTA	4636930.	5879032.	2974.	10040.	0.	0.
MISSISSIPPI	2367906.	4950002.	1872.	411.	0.	0.
MISSOURI	337224.	2864239.	1230.	1553.	0.	0.
MONTANA	375216.	772564.	442.	262.	0.	0.
NEBRASKA	187926.	2554655.	924.	847.	0.	0.
NEVADA	268463.	152637.	114.	0.	0.	0.
NEW HAMPSHIRE	36493.	1324237.	1955.	0.	0.	0.
NEW JERSEY	291704.	6253847.	4273.	0.	0.	0.
NEW MEXICO	7701.	622282.	541.	364.	0.	0.
NEW YORK	15713751.	8270313.	199086.	16998.	0.	0.
NORTH CAROLINA	1874602.	2326884.	680.	1516.	0.	0.
NORTH DAKOTA	615742.	468196.	99.	0.	0.	0.
OHIO	6851784.	4401084.	4183.	1808.	0.	0.
OKLAHOMA	4772.	6637264.	5.	1950.	0.	0.
OREGON	148168.	2867237.	648.	3196.	0.	0.
PENNSYLVANIA	11815787.	5452662.	17489.	14940.	0.	0.
RHODE ISLAND	509086.	875851.	975.	3349.	0.	0.
SOUTH CAROLINA	1416960.	886744.	1753.	701.	0.	0.
SOUTH DAKOTA	358715.	1019644.	71.	548.	0.	0.
TENNESSEE	41500.	4277367.	1475.	2671.	0.	0.
TEXAS	1549411.	20109536.	1531.	7499.	0.	0.
UTAH	414588.	994257.	215.	806.	0.	0.
VERMONT	54137.	646162.	1589.	304.	0.	0.
VIRGINIA	197016.	3442610.	1796.	2979.	0.	0.
WASHINGTON	5472352.	1491597.	2241.	630.	0.	0.
WEST VIRGINIA	8402.	707025.	245.	0.	0.	0.
WISCONSIN	7463087.	9668810.	10764.	3511.	0.	0.
WYOMING	134229.	234483.	88.	0.	0.	0.
NATIONAL TOTAL	120359472.	163839544.	370112.	101937.	0.	0.

LIC UTILIZATION
YEAR: 1977

MEDICATED

STATE	SWF (DAYS)	ICF (DAYS)	HJML HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL
ALABAMA	3289224	2064295	2234	0	0	0	3817
ALASKA	26394	100038	55	246	0	0	0
ARIZONA	0	0	0	0	0	0	0
ARKANSAS	881278	3836064	284	0	0	0	151
CALIFORNIA	20871232	1378878	12340	0	0	0	37028
COLORADO	1197594	2006512	1618	1906	0	0	1523
CONNECTICUT	3890195	302038	28273	2592	0	0	9324
DELAWARE	15034	274104	174	362	0	0	56
DIST OF COLUMBIA	63625	361822	1536	494	0	0	1035
FLORIDA	2713716	2753500	1081	340	0	0	3106
GEORGIA	4108034	2664143	1295	1917	0	0	1645
HAWAII	410090	282190	580	0	0	0	412
IDAH0	304794	553040	186	484	0	0	383
ILLINOIS	3791369	13495142	4744	0	0	0	3323
INDIANA	1113545	5824460	2225	0	0	0	857
IOWA	23248	5046228	497	1515	0	0	359
KANSAS	211635	3872043	432	1902	0	0	130
KENTUCKY	902124	2167457	4060	625	0	0	1151
LOUISIANA	270923	5211227	1040	3466	0	0	0
MAINE	77653	2053706	1435	0	0	0	142
MARYLAND	1616317	1895855	2103	0	0	0	699
MASSACHUSETTS	4911634	6798689	17193	4083	0	0	2077
MICHIGAN	639007	5165032	2937	4170	0	0	6995
MINNESOTA	4636930	5879032	2974	10040	0	0	528
MISSISSIPPI	2367905	495002	1872	411	0	0	188
MISSOURI	337224	2864239	1230	1552	0	0	416
MONTANA	375216	772564	442	262	0	0	774
NEBRASKA	187826	2554656	924	847	0	0	155
NEVADA	268463	152537	114	0	0	0	544
NEW HAMPSHIRE	36493	1324235	1955	0	0	0	327
NEW JERSEY	291704	6253849	4273	0	0	0	494
NEW MEXICO	7701	622282	541	364	0	0	47
NEW YORK	1577352	8270313	183775	16898	0	0	64068
NORTH CAROLINA	1874601	2326884	680	1516	0	0	2548
NORTH DAKOTA	615742	468196	99	0	0	0	64
OHIO	6851783	4401082	4183	1808	0	0	4709
OKLAHOMA	4772	6637265	5	1950	0	0	252
OREGON	148158	2867236	648	3195	0	0	573
PENNSYLVANIA	11815745	5452660	17849	14940	0	0	9041
RHODE ISLAND	509086	875851	975	3344	0	0	2071
SOUTH CAROLINA	1416960	886744	1753	701	0	0	504
SOUTH DAKOTA	358715	1010594	91	548	0	0	114
TENNESSEE	41500	4277366	1475	2571	0	0	39364
TEXAS	1549410	20109520	1531	7499	0	0	714
UTAH	414538	994257	215	803	0	0	563
VIRGINIA	54137	546102	1539	304	0	0	185
WASHINGTON	127016	3442611	1796	2979	0	0	160
WASHINGTON	5472351	1491597	2241	630	0	0	5731
WEST VIRGINIA	8402	707025	245	0	0	0	231
WISCONSIN	7463085	9658611	10764	3511	0	0	1400
WYOMING	11557	234483	88	0	0	0	0

LTC RECIPIENTS
YEAR: 1977

MEDICAID

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STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	15229.	9094.	2234.	0.	0.	0.	477.	27034.
ALASKA	212.	559.	55.	240.	0.	0.	0.	1132.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	4614.	14811.	284.	0.	0.	0.	19.	19728.
CALIFORNIA	119204.	8564.	12340.	0.	0.	0.	4629.	144797.
COLORADO	10789.	11336.	1618.	1906.	0.	0.	0.	25840.
CONNECTICUT	17845.	1573.	28273.	2592.	0.	0.	1165.	51448.
DELAWARE	101.	1114.	174.	382.	0.	0.	7.	1778.
DIST OF COLUMBIA	522.	1277.	1536.	494.	0.	0.	129.	3958.
FLORIDA	13916.	12988.	1081.	340.	0.	0.	388.	28714.
GEORGIA	20237.	20031.	1295.	1917.	0.	0.	206.	43685.
HAWAII	2734.	1390.	580.	0.	0.	0.	51.	4755.
IDAH0	1532.	2152.	186.	484.	0.	0.	48.	4401.
ILLINOIS	22043.	57430.	4744.	0.	0.	0.	415.	84633.
INDIANA	7093.	21350.	2225.	0.	0.	0.	107.	30774.
IOWA	327.	18829.	497.	1515.	0.	0.	44.	21212.
KANSAS	1460.	14557.	432.	1902.	0.	0.	16.	18366.
KENTUCKY	6353.	9720.	4060.	625.	0.	0.	144.	20901.
LOUISIANA	1266.	21623.	1040.	3466.	0.	0.	0.	27395.
MAINE	532.	6646.	1435.	0.	0.	0.	18.	8631.
MARYLAND	7433.	7435.	2103.	0.	0.	0.	87.	17108.
MASSACHUSETTS	27749.	33824.	17193.	4088.	0.	0.	260.	83114.
MICHIGAN	29353.	22943.	2937.	4170.	0.	0.	874.	60277.
MINNESOTA	19401.	22965.	2974.	10040.	0.	0.	66.	55446.
MISSISSIPPI	9178.	2089.	1872.	411.	0.	0.	23.	13573.
MISSOURI	2444.	11984.	1230.	1552.	0.	0.	52.	17262.
MONTANA	2836.	3714.	442.	262.	0.	0.	97.	7401.
NEBRASKA	1043.	9059.	924.	847.	0.	0.	19.	11893.
NEVADA	1316.	730.	114.	0.	0.	0.	68.	2228.
NEW HAMPSHIRE	596.	4646.	1955.	0.	0.	0.	41.	7241.
NEW JERSEY	2515.	23423.	4273.	0.	0.	0.	62.	30272.
NEW MEXICO	128.	2412.	541.	364.	0.	0.	6.	3451.
NEW YORK	83020.	78765.	183775.	16898.	0.	0.	8009.	370466.
NORTH CAROLINA	14878.	15110.	680.	1516.	0.	0.	318.	32502.
NORTH DAKOTA	2199.	1829.	99.	0.	0.	0.	8.	4135.
OHIO	27853.	16993.	4183.	1803.	0.	0.	589.	51425.
OKLAHOMA	33.	28364.	5.	1450.	0.	0.	32.	30384.
OREGON	1347.	12631.	648.	3196.	0.	0.	72.	17894.
PENNSYLVANIA	64922.	31158.	17889.	14940.	0.	0.	1130.	130039.
RHODE ISLAND	3487.	10427.	975.	3348.	0.	0.	259.	18496.
SOUTH CAROLINA	7265.	3872.	1753.	701.	0.	0.	63.	13655.
SOUTH DAKOTA	1741.	3858.	91.	548.	0.	0.	14.	6252.
TENNESSEE	1804.	17748.	1475.	2671.	0.	0.	4921.	28619.
TEXAS	11563.	79171.	1531.	7499.	0.	0.	89.	99853.
UTAH	2032.	3696.	215.	800.	0.	0.	70.	6820.
VERMONT	658.	2703.	1519.	304.	0.	0.	23.	5288.
VIRGINIA	1349.	13343.	1796.	2979.	0.	0.	20.	19488.
WASHINGTON	21129.	6215.	2241.	630.	0.	0.	716.	30931.
WEST VIRGINIA	150.	3781.	245.	0.	0.	0.	29.	4205.
WISCONSIN	33923.	37331.	10764.	3511.	0.	0.	175.	85704.
WYOMING	41.	565.	38.	0.	0.	0.	0.	694.
NATIONAL TOTAL	629628.	747829.	330687.	100905.	0.	0.	26248.	1835241.

LTC EXPENDITURES (\$1000)
YEAR: 1977

MEDICAID, FEDERAL SHARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	39721	22536	839	0	0	0	139	63235
ALASKA	1105	2375	5	1416	0	0	0	4901
ARIZONA	0	0	0	0	0	0	0	0
ARKANSAS	8760	49172	55	0	0	0	5	57992
CALIFORNIA	201208	10217	1158	0	0	0	1491	214074
COLORADO	11476	14312	8	5774	0	0	50	31622
CONNECTICUT	46239	2171	1064	43079	0	0	335	92869
DELAWARE	146	3349	53	463	0	0	2	4013
DIST OF COLUMBIA	772	2934	551	3715	0	0	44	8017
FLORIDA	24910	20993	135	1343	0	0	100	47381
GEORGIA	35458	43655	322	15577	0	0	49	95062
HAWAII	8008	4384	109	0	0	0	14	12515
IDAH0	3346	5598	54	3653	0	0	14	12665
ILLINOIS	32416	78096	705	0	0	0	118	111335
INDIANA	15915	51194	602	0	0	0	27	67798
IOWA	386	40041	55	13107	0	0	11	53599
KANSAS	1637	22201	71	8153	0	0	4	32065
KENTUCKY	16154	23435	1291	8143	0	0	41	49065
LOUISIANA	2410	54879	285	22767	0	0	0	80340
MAINE	1315	26015	423	0	0	0	6	27760
MARYLAND	16365	16827	240	0	0	0	23	33506
MASSACHUSETTS	46616	6383	3085	30275	0	0	80	143438
MICHIGAN	72639	48467	455	20315	0	0	263	142139
MINNESOTA	50558	42329	752	35824	0	0	17	129490
MISSISSIPPI	30500	5741	204	1726	0	0	6	39177
MISSOURI	2742	22286	108	10486	0	0	13	35634
MONTANA	4157	7271	104	1814	0	0	28	13383
NEBRASKA	1783	15552	170	4732	0	0	4	22241
NEVADA	2757	1364	42	0	0	0	18	4182
NEW HAMPSHIRE	585	13919	255	0	0	0	13	14775
NEW JERSEY	3762	71128	1151	0	0	0	18	76089
NEW MEXICO	175	7504	127	1694	0	0	2	9502
NEW YORK	396194	151360	8253	62737	0	0	2642	680197
NORTH CAROLINA	27230	33627	19	2071	0	0	74	63021
NORTH DAKOTA	6224	3319	20	0	0	0	1	9564
OHIO	65201	32700	438	7669	0	0	168	106226
OKLAHOMA	52	62351	0	15009	0	0	5	77420
OREGON	1482	21907	81	13441	0	0	24	36934
PENNSYLVANIA	111677	44613	1159	60469	0	0	338	218255
RHODE ISLAND	6109	9694	102	8809	0	0	90	24804
SOUTH CAROLINA	24983	12103	353	4028	0	0	16	41514
SOUTH DAKOTA	3158	7932	3	2799	0	0	4	13896
TENNESSEE	827	47657	249	14553	0	0	1324	64909
TEXAS	19090	180640	355	30105	0	0	22	230224
UTAH	5340	14196	67	993	0	0	22	20618
VERMONT	902	9000	404	1442	0	0	8	11755
VIRGINIA	3814	42255	480	12773	0	0	5	59328
WASHINGTON	33594	8277	447	3823	0	0	207	46348
WEST VIRGINIA	113	9014	71	0	0	0	9	9207
WISCONSIN	68735	62518	1031	28975	0	0	48	161306
WYOMING	101	1835	155	0	0	0	0	2091
NATIONAL TOTAL	1458759	1548326	87377	504051	0	0	7947	3605400

LTC EXPENDITURES (\$1000)
YEAR: 1977

MEDICAID, STATE SHARE

E-15

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	14109.	8005.	298.	0.	0.	0.	49.	22461.
ALASKA	1105.	2375.	5.	1416.	0.	0.	0.	4901.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	2983.	16742.	19.	0.	0.	0.	2.	19745.
CALIFORNIA	201208.	10217.	1158.	0.	0.	0.	1491.	214014.
COLORADO	9508.	11857.	7.	4784.	0.	0.	42.	26198.
CONNECTICUT	46239.	2171.	1044.	43073.	0.	0.	335.	92869.
DELAWARE	145.	3349.	53.	463.	0.	0.	2.	4013.
DIST OF COLUMBIA	712.	2934.	551.	3716.	0.	0.	44.	8017.
FLORIDA	18458.	15618.	100.	999.	0.	0.	75.	35251.
GEORGIA	18135.	22389.	165.	7989.	0.	0.	25.	48754.
HAWAII	8008.	4384.	109.	0.	0.	0.	14.	12515.
IDAHO	1552.	2612.	25.	1705.	0.	0.	7.	5911.
ILLINOIS	32415.	78096.	705.	0.	0.	0.	119.	111335.
INDIANA	11778.	37885.	490.	0.	0.	0.	20.	50173.
IOWA	239.	30047.	41.	9835.	0.	0.	3.	40229.
KANSAS	1393.	18897.	61.	5939.	0.	0.	3.	21293.
KENTUCKY	6480.	9401.	518.	3267.	0.	0.	16.	19682.
LOUISIANA	918.	20910.	108.	8675.	0.	0.	0.	30612.
MAINE	548.	10833.	176.	9.	0.	0.	3.	11560.
MARYLAND	16355.	16827.	290.	0.	0.	0.	23.	33506.
MASSACHUSETTS	46616.	63383.	3085.	30275.	0.	0.	80.	143438.
MICHIGAN	72639.	48467.	455.	20315.	0.	0.	263.	142139.
MINNESOTA	38394.	32142.	571.	27202.	0.	0.	13.	98325.
MISSISSIPPI	8403.	1593.	57.	479.	0.	0.	2.	10593.
MISSOURI	1907.	15500.	75.	7293.	0.	0.	9.	24783.
MONTANA	2425.	4232.	60.	1056.	0.	0.	16.	7789.
NEBRASKA	1424.	12424.	136.	3780.	0.	0.	4.	17768.
NEVADA	2757.	1364.	42.	0.	0.	0.	18.	4182.
NEW HAMPSHIRE	335.	9172.	170.	0.	0.	0.	8.	9735.
NEW JERSEY	3762.	71128.	1181.	0.	0.	0.	18.	76089.
NEW MEXICO	64.	2735.	46.	617.	0.	0.	1.	3463.
NEW YORK	396198.	151366.	67253.	62737.	0.	0.	2642.	680191.
NORTH CAROLINA	12797.	15803.	9.	973.	0.	0.	35.	29616.
NORTH DAKOTA	4583.	2444.	15.	0.	0.	0.	1.	7043.
OHIO	56921.	28547.	426.	6695.	0.	0.	147.	92736.
OKLAHOMA	25.	30130.	0.	7253.	0.	0.	4.	37412.
OREGON	1028.	15198.	56.	9325.	0.	0.	17.	25624.
PENNSYLVANIA	89942.	35930.	933.	48701.	0.	0.	273.	175779.
RHODE ISLAND	4674.	7448.	78.	6763.	0.	0.	69.	19058.
SOUTH CAROLINA	8971.	4345.	138.	1446.	0.	0.	6.	14906.
SOUTH DAKOTA	1539.	3866.	2.	1364.	0.	0.	2.	6773.
TENNESSEE	347.	20009.	105.	6236.	0.	0.	556.	27252.
TEXAS	10931.	103430.	210.	17238.	0.	0.	12.	131820.
UTAH	2294.	6072.	29.	425.	0.	0.	10.	8820.
VERMONT	390.	3890.	175.	623.	0.	0.	3.	5082.
VIRGINIA	2723.	30175.	343.	9121.	0.	0.	3.	42366.
WASHINGTON	28941.	7130.	355.	3293.	0.	0.	178.	39929.
WEST VIRGINIA	44.	3523.	28.	0.	0.	0.	3.	3598.
WISCONSIN	45975.	41835.	690.	19389.	0.	0.	32.	107941.
WYOMING	64.	1176.	99.	0.	0.	0.	0.	1340.
NATIONAL TOTAL	1239721.	1100010.	82772.	385471.	0.	0.	6702.	2814619.

LFC EXPENDITURES (\$1000)
YEAR: 1977

MEDICAID, TOTAL

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	53830.	30541.	1137.	0.	0.	0.	183.	85696.
ALASKA	2211.	4749.	10.	2832.	0.	0.	0.	9802.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	11742.	65914.	74.	0.	0.	0.	7.	77737.
CALIFORNIA	402416.	20434.	2316.	0.	0.	0.	2982.	428149.
COLORADO	20984.	26170.	15.	10558.	0.	0.	92.	57820.
CONNECTICUT	92479.	4342.	2089.	36158.	0.	0.	670.	185737.
DELAWARE	293.	6699.	105.	926.	0.	0.	4.	8026.
DIST OF COLUMBIA	1543.	5869.	1102.	7433.	0.	0.	88.	16034.
FLORIDA	43268.	36611.	235.	2343.	0.	0.	175.	82632.
GEORGIA	53643.	66045.	488.	23566.	0.	0.	75.	143816.
HAWAII	16016.	8768.	217.	0.	0.	0.	29.	25030.
IDAH0	4908.	8210.	79.	5358.	0.	0.	21.	18576.
ILLINOIS	64832.	156192.	1410.	0.	0.	0.	236.	222670.
INDIANA	27692.	89080.	1151.	0.	0.	0.	47.	117971.
IOWA	675.	70088.	96.	22942.	0.	0.	19.	93819.
KANSAS	3030.	41093.	132.	15092.	0.	0.	7.	59358.
KENTUCKY	22634.	32836.	1809.	11410.	0.	0.	58.	68747.
LOUISIANA	3328.	75789.	393.	31442.	0.	0.	0.	110952.
MAINE	1864.	36348.	599.	0.	0.	0.	9.	39320.
MARYLAND	32730.	33654.	581.	0.	0.	0.	47.	67012.
MASSACHUSETTS	93231.	126767.	6169.	60549.	0.	0.	159.	286876.
MICHIGAN	145278.	96935.	910.	40629.	0.	0.	526.	285278.
MINNESOTA	88956.	74471.	1323.	63027.	0.	0.	29.	227816.
MISSISSIPPI	38963.	7334.	260.	2206.	0.	0.	7.	48769.
MISSOURI	4649.	37786.	183.	17773.	0.	0.	22.	60418.
MONTANA	6592.	11504.	164.	2869.	0.	0.	44.	21173.
NEBRASKA	3207.	27976.	305.	8512.	0.	0.	8.	40009.
NEVADA	5514.	2729.	34.	0.	0.	0.	36.	8363.
NEW HAMPSHIRE	970.	23091.	426.	0.	0.	0.	21.	24510.
NEW JERSEY	7524.	142257.	2362.	0.	0.	0.	36.	152179.
NEW MEXICO	239.	10239.	173.	2311.	0.	0.	2.	12965.
NEW YORK	792397.	302731.	134506.	125475.	0.	0.	5285.	1360391.
NORTH CAROLINA	40027.	49429.	27.	3044.	0.	0.	109.	92636.
NORTH DAKOTA	10807.	5763.	34.	0.	0.	0.	2.	16606.
OHIO	122123.	61247.	914.	14365.	0.	0.	314.	198963.
OKLAHOMA	77.	92481.	0.	22262.	0.	0.	12.	114832.
OREGON	2509.	37105.	137.	22766.	0.	0.	41.	62558.
PENNSYLVANIA	201619.	80543.	2092.	109170.	0.	0.	611.	394034.
RHODE ISLAND	10803.	17142.	180.	15577.	0.	0.	160.	43861.
SOUTH CAROLINA	33954.	16449.	521.	5474.	0.	0.	22.	56420.
SOUTH DAKOTA	4637.	11799.	5.	4164.	0.	0.	5.	20670.
TENNESSEE	1174.	67666.	354.	21088.	0.	0.	1879.	92161.
TEXAS	30021.	284070.	576.	47344.	0.	0.	34.	362044.
UTAH	1625.	20269.	95.	1417.	0.	0.	32.	29438.
VERMONT	1292.	12891.	579.	2065.	0.	0.	11.	16838.
VIRGINIA	6537.	72431.	823.	21895.	0.	0.	8.	101694.
WASHINGTON	62535.	15407.	833.	7116.	0.	0.	386.	86276.
WEST VIRGINIA	157.	12538.	99.	0.	0.	0.	12.	12806.
WISCONSIN	114730.	104353.	1721.	48364.	0.	0.	80.	267248.
WYOMING	165.	3012.	254.	0.	0.	0.	0.	3431.
NATIONAL TOTAL	2098679.	2668332.	170150.	849523.	0.	0.	0.	14621.

MEDICAID

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	4631891.	3611333.	3455.	9119.	0.	0.	0.	8255798.
ALASKA	42415.	21806.	812.	295.	0.	0.	0.	65329.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	1037067.	1423857.	14703.	0.	0.	0.	0.	2475627.
CALIFORNIA	18787072.	11263385.	18610.	0.	0.	0.	0.	30069056.
COLORADO	1995926.	815123.	15264.	2215.	0.	0.	0.	2728525.
CONNECTICUT	3633215.	2112726.	46105.	2950.	0.	0.	0.	5794995.
DELAWARE	31636.	140982.	1513.	418.	0.	0.	0.	174549.
DIST OF COLUMBIA	81166.	568669.	2539.	508.	0.	0.	0.	652482.
FLORIDA	5222573.	1970677.	16004.	395.	0.	0.	0.	7209650.
GEORGIA	6739341.	1090341.	25483.	2127.	0.	0.	0.	7857292.
HAWAII	473883.	436935.	915.	0.	0.	0.	0.	911633.
IDAHO	437631.	211319.	2468.	544.	0.	0.	0.	651963.
ILLINOIS	5045299.	9153495.	43592.	0.	0.	0.	0.	14247385.
INDIANA	1803053.	2750345.	26229.	0.	0.	0.	0.	4589625.
IOWA	49854.	2507243.	20464.	1617.	0.	0.	0.	2579175.
KANSAS	253667.	166854.	11303.	2630.	0.	0.	0.	1934454.
KENTUCKY	1139908.	1498696.	11399.	656.	0.	0.	0.	2650659.
LOUISIANA	364592.	1963981.	26235.	3894.	0.	0.	0.	2358701.
MAINE	98358.	1279141.	5528.	0.	0.	0.	0.	1383056.
MARYLAND	2039061.	1389130.	8339.	0.	0.	0.	0.	3436529.
MASSACHUSETTS	5654580.	4577061.	40924.	4235.	0.	0.	0.	10276899.
MICHIGAN	7904889.	2644243.	21218.	5748.	0.	0.	0.	10576097.
MINNESOTA	5316630.	2221510.	23785.	14511.	0.	0.	0.	3977900.
MISSISSIPPI	2517155.	1457135.	3016.	596.	0.	0.	0.	7576434.
MISSOURI	545705.	1587796.	14038.	1667.	0.	0.	0.	3977900.
MONTANA	584372.	438578.	4092.	373.	0.	0.	0.	2149203.
NEBRASKA	235105.	1359724.	8533.	939.	0.	0.	0.	1027415.
NEVADA	416117.	381825.	191.	0.	0.	0.	0.	1604305.
NEW HAMPSHIRE	54192.	680245.	6737.	0.	0.	0.	0.	798133.
NEW JERSEY	486616.	3456169.	29047.	0.	0.	0.	0.	741224.
NEW MEXICO	13737.	295873.	3547.	417.	0.	0.	0.	3971831.
NEW YORK	18465923.	12348290.	253102.	18045.	0.	0.	0.	313629.
NORTH CAROLINA	2551716.	1244555.	12440.	1733.	0.	0.	0.	31086336.
NORTH DAKOTA	722529.	242948.	1671.	0.	0.	0.	0.	3820444.
OHIO	8895158.	7492747.	5746.	1423.	0.	0.	0.	967148.
OKLAHOMA	22498.	3193760.	28168.	2134.	0.	0.	0.	16385573.
OREGON	265432.	1247007.	14505.	3559.	0.	0.	0.	3246558.
PENNSYLVANIA	13651410.	3016528.	29430.	20903.	0.	0.	0.	1530501.
RHODE ISLAND	727160.	331332.	11253.	3561.	0.	0.	0.	21718352.
SOUTH CAROLINA	1933012.	1581735.	2764.	784.	0.	0.	0.	1073303.
SOUTH DAKOTA	557348.	661754.	6025.	591.	0.	0.	0.	3518293.
TENNESSEE	68645.	10350502.	72981.	3905.	0.	0.	0.	1226316.
TEXAS	2513657.	8871867.	96202.	8412.	0.	0.	0.	10196032.
UTAH	556595.	392461.	3739.	915.	0.	0.	0.	11490137.
VERMONT	74160.	567612.	3807.	343.	0.	0.	0.	953771.
VIRGINIA	253851.	1704777.	13102.	4416.	0.	0.	0.	645923.
WASHINGTON	5805659.	3433882.	3335.	710.	0.	0.	0.	1976144.
WEST VIRGINIA	15929.	548337.	4662.	0.	0.	0.	0.	9243546.
WISCONSIN	8933730.	4508494.	36447.	3702.	0.	0.	0.	568928.
WYOMING	18929.	112212.	796.	0.	0.	0.	0.	13042771.
NATIONAL TOTAL	143181504.	131531808.	1056615.	131551.	0.	0.	0.	275899904.

LIC SUPPLY
YEAR: 1980

MEDICATED

STATE	SHE (DAYS)	ICF (DAYS)	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER
ALABAMA	2444972.	2395033.	4229.	0.	0.	0.
ALASKA	30517.	118680.	107.	162.	0.	0.
ARIZONA	0.	0.	0.	0.	0.	0.
ARKANSAS	739474.	4684195.	446.	0.	0.	0.
CALIFORNIA	23743552.	1484580.	13289.	0.	0.	0.
COLORADO	1301454.	2296916.	2107.	1815.	0.	0.
CONNECTICUT	4656635.	334859.	92178.	2592.	0.	0.
DELAWARE	15198.	245553.	225.	494.	0.	0.
DIST OF COLUMBIA	33295.	175984.	2054.	423.	0.	0.
FLORIDA	2609414.	3326797.	2325.	514.	0.	0.
GEORGIA	3710266.	5558830.	2277.	3239.	0.	0.
HAWAII	413497.	403695.	741.	0.	0.	0.
IDAH0	311534.	534279.	304.	892.	0.	0.
ILLINOIS	3801788.	14017687.	5539.	0.	0.	0.
INDIANA	1138429.	5916049.	2525.	1027.	0.	0.
IOWA	32266.	5357437.	1293.	1568.	0.	0.
KANSAS	144162.	4079788.	817.	1749.	0.	0.
KENTUCKY	845459.	2517200.	7157.	625.	0.	0.
LOUISIANA	235008.	6133344.	1779.	3737.	0.	0.
MAINE	92312.	2205001.	1614.	0.	0.	0.
MARYLAND	1347310.	2325747.	2540.	0.	0.	0.
MASSACHUSETTS	4639939.	5822341.	24545.	4756.	0.	0.
MICHIGAN	6629839.	5203759.	4060.	5087.	0.	0.
MINNESOTA	4709425.	5526697.	4464.	13063.	0.	0.
MISSISSIPPI	2426326.	648862.	6268.	706.	0.	0.
MISSOURI	105700.	3672365.	2665.	1527.	0.	0.
MONTANA	162238.	1047848.	809.	303.	0.	0.
NEBRASKA	218797.	2545189.	2884.	919.	0.	0.
NEVADA	218439.	250587.	152.	0.	0.	0.
NEW HAMPSHIRE	35719.	1379587.	2429.	0.	0.	0.
NEW JERSEY	290059.	7490019.	9606.	0.	0.	0.
NEW MEXICO	14142.	601784.	1247.	441.	0.	0.
NEW YORK	15458031.	9405740.	484403.	15996.	0.	0.
NORTH CAROLINA	1625625.	2353617.	1097.	1903.	0.	0.
NORTH DAKOTA	63635.	476559.	124.	0.	0.	0.
OHIO	7114595.	4685069.	4832.	3514.	0.	0.
OKLAHOMA	1194.	5689715.	11.	1906.	0.	0.
OREGON	229704.	2505122.	759.	2765.	0.	0.
PENNSYLVANIA	7907903.	3791969.	31691.	10150.	0.	0.
RHODE ISLAND	556760.	1155199.	1075.	3349.	0.	0.
SOUTH CAROLINA	1637865.	912067.	1972.	1073.	0.	0.
SOUTH DAKOTA	216012.	1267763.	112.	575.	0.	0.
TENNESSEE	114694.	5215319.	2594.	2137.	0.	0.
TEXAS	1691048.	20579040.	4430.	8447.	0.	0.
UTAH	431750.	759846.	268.	2394.	0.	0.
VERMONT	35317.	681243.	2694.	601.	0.	0.
VIRGINIA	197244.	3817832.	2710.	2742.	0.	0.
WASHINGTON	5010659.	1491597.	3539.	473.	0.	0.
WEST VIRGINIA	8178.	236220.	472.	0.	0.	0.
WISCONSIN	14628053.	598219.	23832.	3511.	0.	0.
WYOMING	113357.	282007.	133.	0.	0.	0.
NATIONAL TOTAL	124712656.	164698704.	769337.	107208.	0.	0.

LIC UTILIZATION
YEAR: 1980

MEDICARE

STATE	SNF (DAYS)	ICF (DAYS)	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL
ALABAMA	2444971.	2395032.	3455.	0.	0.	0.	39105.
ALASKA	30517.	118680.	107.	162.	0.	0.	283.
ARIZONA	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	739474.	4688195.	446.	0.	0.	0.	4016.
CALIFORNIA	23743535.	1484580.	13739.	0.	0.	0.	81171.
COLORADO	1301453.	2276917.	2107.	1815.	0.	0.	13532.
CONNECTICUT	4656634.	834859.	46105.	2592.	0.	0.	4919.
DELAWARE	15199.	245553.	225.	419.	0.	0.	274.
DIST OF COLUMBIA	33295.	175984.	2064.	423.	0.	0.	4300.
FLORIDA	2609413.	3326796.	2326.	396.	0.	0.	34757.
GEORGIA	3710265.	4176764.	2277.	2127.	0.	0.	37902.
HAWAII	413497.	403605.	741.	0.	0.	0.	1382.
IDAH0	311584.	534279.	334.	544.	0.	0.	1611.
ILLINOIS	3801787.	14017885.	5539.	0.	0.	0.	18515.
INDIANA	1136429.	5716048.	2525.	0.	0.	0.	10840.
IOWA	32266.	5357437.	1298.	1566.	0.	0.	653.
KANSAS	144162.	4079789.	617.	1749.	0.	0.	1962.
KENTUCKY	846469.	2444703.	7157.	625.	0.	0.	5261.
LOUISIANA	235308.	6133343.	1779.	3737.	0.	0.	1559.
MAINE	92312.	2205000.	1614.	0.	0.	0.	109.
MARYLAND	1347309.	2325748.	2540.	0.	0.	0.	8056.
MASSACHUSETTS	4639937.	5922341.	24545.	4235.	0.	0.	14632.
MICHIGAN	6629837.	5203758.	4060.	5087.	0.	0.	14678.
MINNESOTA	4709425.	5526698.	4464.	13063.	0.	0.	6462.
MISSISSIPPI	2423325.	648862.	3016.	595.	0.	0.	9424.
MISSOURI	105700.	3672365.	2665.	1527.	0.	0.	8252.
MONTANA	162238.	1047848.	809.	303.	0.	0.	8268.
NEBRASKA	218797.	2545186.	2864.	919.	0.	0.	235.
NEVADA	213439.	250587.	132.	0.	0.	0.	3933.
NEW HAMPSHIRE	35719.	1379586.	2429.	0.	0.	0.	779.
NEW JERSEY	290059.	7480019.	9606.	0.	0.	0.	4354.
NEW MEXICO	13787.	501788.	1247.	417.	0.	0.	0.
NEW YORK	15458032.	9405740.	253102.	15996.	0.	0.	110052.
NORTH CAROLINA	1625624.	2353616.	1077.	1733.	0.	0.	18811.
NORTH DAKOTA	636835.	476559.	124.	0.	0.	0.	775.
OHIO	7114593.	4685068.	4932.	1923.	0.	0.	45282.
OKLAHOMA	1194.	5688714.	11.	1905.	0.	0.	391.
OREGON	229704.	2505122.	759.	2765.	0.	0.	834.
PENNSYLVANIA	7907893.	3791968.	29430.	10150.	0.	0.	142054.
RHODE ISLAND	566750.	1155198.	1075.	3349.	0.	0.	2968.
SOUTH CAROLINA	1637464.	912067.	1972.	734.	0.	0.	10943.
SOUTH DAKOTA	216012.	1267762.	112.	575.	0.	0.	4285.
TENNESSEE	114694.	5215317.	2594.	2137.	0.	0.	45335.
TEXAS	1691047.	20579024.	4430.	8412.	0.	0.	15706.
UTAH	431750.	759846.	265.	976.	0.	0.	1527.
VERMONT	35317.	681243.	2604.	343.	0.	0.	1214.
VIRGINIA	197244.	3817832.	2719.	2782.	0.	0.	984.
WASHINGTON	5010659.	1491595.	335.	473.	0.	0.	28154.
WEST VIRGINIA	8178.	236220.	472.	0.	0.	0.	4599.
WISCONSIN	11855196.	598215.	23832.	3511.	0.	0.	0.
WYOMING	18929.	282007.	133.	0.	0.	0.	0.
NATIONAL TOTAL	121844992.	163244096.	485420.	100116.	0.	0.	775139.

LIC RECIPIENTS
YEAR: 1980

MEDICAID

E-20

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	11312	10551	3455	0	0	0	4888	30214
ALASKA	315	663	107	162	0	0	35	1282
ARIZONA	0	0	0	0	0	0	0	0
ARKANSAS	3872	18101	446	0	0	0	502	22921
CALIFORNIA	135677	9221	13289	0	0	0	10146	168334
COLORADO	11725	12977	2107	1815	0	0	1692	30315
CONNECTICUT	21361	4348	46105	2592	0	0	615	75021
DELAWARE	98	958	225	418	0	0	34	1774
DIST OF COLUMBIA	273	592	2064	423	0	0	537	3889
FLORIDA	13382	15692	2326	396	0	0	4345	36141
GEORGIA	18277	31404	2277	2127	0	0	4738	58824
HAWAII	2757	1989	741	0	0	0	173	5659
IDAH0	1566	2079	304	544	7	0	201	4694
ILLINOIS	22103	59651	5539	0	0	0	2314	89607
INDIANA	7251	21671	2525	0	0	0	1355	32802
IOWA	454	19990	1298	1566	0	0	82	23390
KANSAS	994	15338	617	1749	0	0	245	18943
KENTUCKY	5961	10963	7157	625	0	0	658	25363
LOUISIANA	1098	25450	1779	3737	0	0	195	32259
MAINE	632	7136	1614	0	0	0	14	9396
MARYLAND	6238	9121	2540	0	0	0	1007	18905
MASSACHUSETTIS	26214	28967	24545	4235	0	0	1829	85791
MICHIGAN	30412	23025	4050	5087	0	0	1835	64419
MINNESOTA	19735	21589	4464	13063	0	0	808	59628
MISSISSIPPI	9404	2734	3016	596	0	0	1178	16932
MISSOURI	766	15366	2665	1527	0	0	1031	21355
MONTANA	1248	5038	809	303	0	0	1034	8431
NEBRASKA	1216	9025	2864	919	0	0	29	14053
NEVADA	1071	1199	162	0	0	0	492	2923
NEW HAMPSHIRE	586	4941	2429	0	0	0	97	7953
NEW JERSEY	2501	28015	9606	0	0	0	544	40666
NEW MEXICO	230	2333	1247	417	0	0	0	4226
NEW YORK	81358	89578	253102	15995	0	0	13756	453791
NORTH CAROLINA	12902	15283	1097	1733	0	0	2351	33366
NORTH DAKOTA	2274	1662	124	0	0	0	97	4357
OHIO	28921	13089	4982	1923	0	0	5660	59575
OKLAHOMA	8	24311	11	1906	0	0	49	26285
OREGON	2088	11036	759	2765	0	0	104	16752
PENNSYLVANIA	43450	21668	29430	10150	0	0	17757	122455
RHODE ISLAND	3813	13752	1075	3349	0	0	371	22361
SOUTH CAROLINA	6399	3983	1972	784	0	0	1368	16506
SOUTH DAKOTA	1049	4839	112	575	0	0	536	7110
TENNESSEE	4987	21640	2594	2137	0	0	5667	37025
TEXAS	12620	81020	4430	8412	0	0	1963	108445
UTAH	2116	2825	2604	976	0	0	191	6374
VERMONT	435	2850	2604	343	0	0	152	5385
VIRGINIA	1351	14796	2710	2782	0	0	124	21764
WASHINGTON	19346	6215	3335	473	0	0	3519	32888
WEST VIRGINIA	146	1263	472	0	0	0	575	2456
WISCONSIN	53397	2310	23832	3511	0	0	0	83540
WYOMING	67	680	133	0	0	0	0	980
NATIONAL TOTAL	63722	758068	485420	100116	0	0	96892	2078366

YEAR: 1989

MEDICAID, FEDERAL SHARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	39148.	35307.	1640.	0.	0.	0.	1815.	77911.
ALASKA	1772.	3770.	12.	1615.	0.	0.	17.	7387.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	10831.	86923.	111.	0.	0.	0.	169.	98034.
CALIFORNIA	334870.	16513.	1631.	0.	0.	0.	4313.	357427.
COLORADO	15945.	23062.	14.	9254.	0.	0.	573.	48848.
CONNECTICUT	81088.	8742.	2228.	74247.	0.	0.	233.	166578.
DELAWARE	192.	4244.	89.	884.	0.	0.	13.	5422.
DIST OF COLUMBIA	543.	1965.	968.	5944.	0.	0.	240.	9660.
FLORIDA	33362.	36958.	390.	2785.	0.	0.	1525.	75019.
GEORGIA	43945.	96323.	749.	30153.	0.	0.	1515.	172684.
HAWAII	12188.	9550.	181.	0.	0.	0.	64.	21983.
IDaho	4643.	7443.	112.	6849.	0.	0.	75.	19121.
ILLINOIS	45982.	121514.	1092.	0.	0.	0.	881.	169469.
INDIANA	22209.	72977.	979.	0.	0.	0.	446.	96611.
IOWA	701.	59727.	185.	23174.	0.	0.	26.	83814.
KANSAS	1657.	35580.	132.	11413.	0.	0.	71.	48853.
KENTUCKY	21326.	37397.	2839.	14454.	0.	0.	236.	76252.
LOUISIANA	2802.	87994.	635.	42435.	0.	0.	65.	133901.
MAINE	2329.	41136.	613.	0.	0.	0.	6.	44084.
MARYLAND	19692.	30140.	459.	0.	0.	0.	357.	50648.
MASSACHUSETTS	70092.	85453.	5931.	60865.	0.	0.	766.	223137.
MICHIGAN	111739.	72156.	823.	38613.	0.	0.	729.	224108.
MINNESOTA	75377.	58515.	1445.	61854.	0.	0.	264.	197455.
MISSISSIPPI	42569.	10434.	425.	4279.	0.	0.	373.	58080.
MISSOURI	1158.	41117.	314.	18238.	0.	0.	343.	61169.
MONTANA	2478.	14077.	253.	3400.	0.	0.	397.	20604.
NEBRASKA	3115.	23476.	713.	9844.	0.	0.	9.	37157.
NEVADA	3084.	3179.	78.	0.	0.	0.	172.	6513.
NEW HAMPSHIRE	868.	21824.	425.	0.	0.	0.	41.	23157.
NEW JERSEY	5134.	120259.	3472.	0.	0.	0.	212.	129073.
NEW MEXICO	400.	9576.	360.	3159.	0.	0.	0.	13495.
NEW YORK	571439.	247876.	121142.	117189.	0.	0.	5990.	1063645.
NORTH CAROLINA	33639.	49909.	39.	4015.	0.	0.	720.	87372.
NORTH DAKOTA	10359.	5389.	35.	0.	0.	0.	24.	15807.
OHIO	96808.	51464.	784.	14560.	0.	0.	2198.	165814.
OKLAHOMA	18.	74613.	0.	26044.	0.	0.	16.	100691.
OREGON	2896.	25644.	117.	18982.	0.	0.	43.	47723.
PENNSYLVANIA	105014.	44262.	2482.	60293.	0.	0.	6985.	219036.
RHODE ISLAND	10156.	19600.	150.	14364.	0.	0.	174.	44445.
SOUTH CAROLINA	38399.	16763.	544.	7511.	0.	0.	443.	63661.
SOUTH DAKOTA	2631.	14347.	5.	5201.	0.	0.	182.	22366.
TENNESSEE	2427.	84235.	505.	18206.	0.	0.	1983.	107816.
TEXAS	25950.	238830.	1271.	53534.	0.	0.	578.	320262.
UTAH	8121.	15542.	105.	1960.	0.	0.	77.	25906.
VERMONT	794.	13911.	446.	3163.	0.	0.	67.	18783.
VIRGINIA	5343.	68119.	913.	17074.	0.	0.	39.	91533.
WASHINGTON	40982.	11316.	411.	5000.	0.	0.	1250.	59357.
WEST VIRGINIA	143.	4219.	108.	0.	0.	0.	218.	4754.
WISCONSIN	164040.	5855.	2458.	53094.	0.	0.	0.	225480.
WYOMING	185.	2575.	251.	0.	0.	0.	0.	3011.
NATIONAL TOTAL	2131159.	2271162.	162420.	843751.	0.	0.	36934.	5445368.

YEAR: 1980

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MEDICAID, STATE SHARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	15743	14198	660	0	0	0	730	31330
ALASKA	1772	3970	12	1615	0	0	17	7387
ARIZONA	0	0	0	0	0	0	0	0
ARKANSAS	4033	32362	71	0	0	0	63	36499
CALIFORNIA	334870	16613	1631	0	0	0	4313	357427
COLORADO	14049	20320	12	8154	0	0	505	43041
CONNECTICUT	81033	8782	2228	74247	0	0	233	166578
DELAWARE	192	4244	49	834	0	0	13	5422
DIST OF COLUMBIA	543	1965	908	5944	0	0	240	9660
FLORIDA	23241	25747	272	1940	0	0	1062	52262
GEORGIA	21880	47959	373	15013	0	0	754	85980
HAWAII	12198	9550	181	0	0	0	64	21983
IDAHO	2424	3885	58	3576	0	0	39	9982
ILLINOIS	44712	113159	1062	0	0	0	857	164789
INDIANA	16564	54427	730	0	0	0	333	12053
IOWA	538	45854	142	17791	0	0	20	64340
KANSAS	1439	30899	114	9912	0	0	62	42427
KENTUCKY	10004	17542	1332	6780	0	0	111	35768
LOUISIANA	1269	39867	274	19226	0	0	29	60666
MAINE	1021	18027	269	0	0	0	3	19319
MARYLAND	19692	30140	459	0	0	0	357	50648
MASSACHUSETTS	65352	79673	5558	56748	0	0	714	208046
MICHIGAN	111758	72156	823	38613	0	0	729	224108
MINNESOTA	60095	46652	1152	49314	0	0	210	157424
MISSISSIPPI	12323	3021	123	1230	0	0	108	16814
MISSOURI	760	27003	206	11977	0	0	225	40172
MONTANA	1377	7823	141	1389	0	0	220	11450
NEBRASKA	2291	17267	524	7240	0	0	7	27329
NEVADA	5094	3179	78	0	0	0	172	6513
NEW HAMPSHIRE	552	13886	270	0	0	0	26	14737
NEW JERSEY	5134	120255	3472	0	0	0	212	129073
NEW MEXICO	179	4296	162	1417	0	0	0	6054
NEW YORK	571489	247876	121142	117189	0	0	5990	1063685
NORTH CAROLINA	16117	23399	19	1921	0	0	345	41800
NORTH DAKOTA	6502	3382	22	0	0	0	15	9920
OHIO	78887	41937	639	11854	0	0	1791	135118
OKLAHOMA	10	42629	0	14380	0	0	9	57529
OREGON	2307	20461	93	15122	0	0	34	38017
PENNSYLVANIA	85436	36010	2019	49052	0	0	5683	178200
RHODE ISLAND	7412	14305	110	10483	0	0	127	32436
SOUTH CAROLINA	15707	6857	223	3072	0	0	0	0
SOUTH DAKOTA	1194	6512	2	2361	0	0	83	10152
TENNESSEE	1245	37089	249	8016	0	0	873	47472
TEXAS	18523	170476	907	38264	0	0	413	228602
UTAH	3810	7290	49	920	0	0	36	12105
VERMONT	367	6427	392	1461	0	0	31	8677
VIRGINIA	4138	52360	706	13124	0	0	30	70358
WASHINGTON	40982	11316	911	5000	0	0	1250	59357
WEST VIRGINIA	72	2045	81	0	0	0	106	2304
WISCONSIN	119031	4248	2095	38529	0	0	0	163904
WYOMING	185	2575	251	0	0	0	0	3011
NATIONAL TOTAL	1843603	1676908	153225	664797	0	0	29425	4367895

LIC EXPENDITURES (\$1000)
YEAR: 1980

E-23

MEDICAID, TOTAL

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	54391.	43505.	2300.	0.	0.	0.	2545.	109241.
ALASKA	3544.	1941.	24.	3230.	0.	0.	35.	14773.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	14864.	119285.	152.	0.	0.	0.	232.	134533.
CALIFORNIA	669740.	33226.	3252.	0.	0.	0.	8627.	714855.
COLORADO	29995.	43482.	25.	17408.	0.	0.	1078.	91889.
CONNECTICUT	162176.	17565.	4455.	144494.	0.	0.	467.	333157.
DELAWARE	385.	8488.	178.	1768.	0.	0.	25.	10844.
DIST OF COLUMBIA	1036.	3930.	1936.	11887.	0.	0.	480.	19320.
FLORIDA	56603.	62705.	601.	4725.	0.	0.	2587.	127281.
GEORGIA	65825.	144282.	1122.	45167.	0.	0.	2269.	258665.
HAWAII	24376.	19099.	363.	0.	0.	0.	128.	43967.
IDAHO	7056.	11329.	170.	10424.	0.	0.	114.	29103.
ILLINOIS	90594.	239673.	2153.	0.	0.	0.	1738.	334258.
INDIANA	38772.	127404.	1709.	0.	0.	0.	779.	168664.
IOWA	1240.	10581.	328.	40965.	0.	0.	47.	148160.
KANSAS	3096.	60479.	246.	21325.	0.	0.	133.	91279.
KENTUCKY	31330.	54939.	4171.	21234.	0.	0.	347.	112020.
LOUISIANA	4071.	127861.	879.	61661.	0.	0.	94.	194567.
MAINE	3349.	59163.	882.	0.	0.	0.	9.	63403.
MARYLAND	33384.	60290.	918.	0.	0.	0.	714.	101296.
MASSACHUSETTS	135444.	165126.	11519.	117613.	0.	0.	1480.	431183.
MICHIGAN	223576.	144312.	1646.	77227.	0.	0.	1457.	448217.
MINNESOTA	135472.	105167.	2598.	111169.	0.	0.	474.	354879.
MISSISSIPPI	54892.	13455.	548.	5517.	0.	0.	480.	74893.
MISSOURI	1918.	68120.	520.	30215.	0.	0.	568.	101341.
MONTANA	3854.	21900.	393.	5289.	0.	0.	617.	32054.
NEBRASKA	5406.	40743.	1239.	17084.	0.	0.	16.	64487.
NEVADA	6158.	6358.	156.	0.	0.	0.	344.	13026.
NEW HAMPSHIRE	1420.	35712.	695.	0.	0.	0.	67.	37895.
NEW JERSEY	10268.	240510.	6943.	0.	0.	0.	425.	258146.
NEW MEXICO	580.	13872.	522.	4576.	0.	0.	0.	19549.
NEW YORK	1142978.	495752.	242295.	234378.	0.	0.	11979.	2127369.
NORTH CAROLINA	49806.	72308.	58.	5936.	0.	0.	1065.	129172.
NORTH DAKOTA	16861.	8771.	56.	0.	0.	0.	39.	25727.
OHIO	175695.	93400.	1423.	26424.	0.	0.	3989.	300932.
OKLAHOMA	28.	117243.	0.	40924.	0.	0.	25.	158220.
OREGON	5203.	46145.	210.	34104.	0.	0.	77.	85740.
PENNSYLVANIA	190450.	80271.	4500.	109345.	0.	0.	12668.	397236.
RHODE ISLAND	17589.	33905.	200.	24846.	0.	0.	302.	76881.
SOUTH CAROLINA	54106.	23620.	767.	10584.	0.	0.	624.	89701.
SOUTH DAKOTA	3825.	20359.	8.	7502.	0.	0.	265.	32518.
TENNESSEE	4072.	121374.	314.	26222.	0.	0.	2656.	155288.
TEXAS	44412.	409306.	2179.	91917.	0.	0.	991.	543864.
UTAH	11731.	22332.	154.	2880.	0.	0.	114.	37911.
VERMONT	1161.	20344.	1240.	4624.	0.	0.	97.	27460.
VIRGINIA	9521.	120479.	1623.	30199.	0.	0.	68.	161890.
WASHINGTON	81963.	22631.	1621.	9999.	0.	0.	2500.	118714.
WEST VIRGINIA	220.	6264.	249.	0.	0.	0.	324.	7058.
WISCONSIN	283071.	10103.	4983.	91627.	0.	0.	0.	389784.
WYOMING	371.	5150.	501.	0.	0.	0.	0.	6022.
NATIONAL TOTAL	3974770.	3946076.	315645.	1508544.	0.	0.	66359.	9813344.

MEDICAL

LIC. DEMAND
YEAR: 1965

STATE	SNF	ICF	HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	7392947.	5335208.	5732.	10745.	0.	0.	0.	1274632.
ALASKA	86004.	38191.	1589.	423.	0.	0.	0.	129207.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	1288015.	2026801.	24113.	0.	0.	0.	0.	3338929.
CALIFORNIA	24620528.	14869556.	30954.	0.	0.	0.	0.	39541056.
COLORADO	3202372.	1254905.	23298.	2907.	0.	0.	0.	4489482.
CONNECTICUT	4314090.	2662112.	91471.	4502.	0.	0.	0.	7072174.
DELAWARE	55881.	229010.	2809.	485.	0.	0.	0.	288165.
DIST OF COLUMBIA	99841.	634828.	4911.	489.	0.	0.	0.	740069.
FLORIDA	10520294.	3622492.	31959.	513.	0.	0.	0.	14175177.
GEORGIA	1133432.	1687612.	44471.	2550.	0.	0.	0.	13068954.
HAWAII	661910.	563763.	1583.	0.	0.	0.	0.	1247255.
IDAHO	647324.	295363.	4159.	681.	0.	0.	0.	947527.
ILLINOIS	6636775.	11549431.	72422.	0.	0.	0.	0.	18258608.
INDIANA	2912086.	4069667.	45937.	0.	0.	0.	0.	7027630.
IOWA	77715.	3582802.	35125.	1802.	0.	0.	0.	3697443.
KANSAS	308639.	1941580.	15772.	2825.	0.	0.	0.	2268865.
KENTUCKY	1416307.	1815380.	18517.	702.	0.	0.	0.	3251006.
LOUISIANA	561486.	3319591.	45016.	4822.	0.	0.	0.	3931014.
MAINE	117111.	1452980.	8183.	0.	0.	0.	0.	1578273.
MARYLAND	2555987.	1689566.	15459.	0.	0.	0.	0.	4260991.
MASSACHUSETTS	6506545.	5203617.	57153.	4312.	0.	0.	0.	11771626.
MICHIGAN	9105998.	3021282.	33256.	6079.	0.	0.	0.	12166623.
MINNESOTA	6141695.	2616413.	33998.	16243.	0.	0.	0.	8448337.
MISSISSIPPI	3976717.	2116784.	4992.	741.	0.	0.	0.	6099233.
MISSOURI	856097.	2286156.	23774.	1883.	0.	0.	0.	3167910.
MONTANA	865315.	565938.	7101.	406.	0.	0.	0.	1438759.
NEBRASKA	277403.	1571725.	14424.	987.	0.	0.	0.	1864541.
NEVADA	914758.	739167.	417.	0.	0.	0.	0.	1654341.
NEW HAMPSHIRE	72084.	1095015.	11911.	0.	0.	0.	0.	1174909.
NEW JERSEY	845092.	5628215.	52176.	0.	0.	0.	0.	6525491.
NEW MEXICO	25566.	482769.	6503.	528.	0.	0.	0.	515566.
NEW YORK	20479296.	14717771.	341166.	19156.	0.	0.	0.	35596352.
NORTH CAROLINA	3569451.	1637675.	19398.	2160.	0.	0.	0.	5228683.
NORTH DAKOTA	850119.	290000.	2641.	0.	0.	0.	0.	1142760.
OHIO	14466094.	10901855.	8997.	2112.	0.	0.	0.	25379024.
OKLAHOMA	28116.	3896270.	53684.	2315.	0.	0.	0.	3980384.
OREGON	462977.	2034325.	27853.	4333.	0.	0.	0.	2529488.
PENNSYLVANIA	16771023.	9754812.	59957.	21964.	0.	0.	0.	26607728.
RHODE ISLAND	860900.	466143.	16130.	4001.	0.	0.	0.	1347172.
SOUTH CAROLINA	3158356.	2392391.	4779.	953.	0.	0.	0.	5556989.
SOUTH DAKOTA	856445.	925243.	10353.	676.	0.	0.	0.	1794715.
TENNESSEE	125585.	13716701.	126043.	4452.	0.	0.	0.	13972819.
TEXAS	4404881.	14131349.	141066.	10236.	0.	0.	0.	18727552.
UTAH	726170.	499575.	6144.	1562.	0.	0.	0.	1233549.
VERMONT	91605.	643060.	5774.	374.	0.	0.	0.	740812.
VIRGINIA	331209.	2074931.	21202.	4950.	0.	0.	0.	2432284.
WASHINGTON	7657408.	4510110.	5902.	785.	0.	0.	0.	12174105.
WEST VIRGINIA	21818.	660385.	7642.	0.	0.	0.	0.	689844.
WISCONSIN	10139340.	5286375.	58592.	3895.	0.	0.	0.	15487902.
WYOMING	35818.	190600.	1660.	0.	0.	0.	0.	228079.

LTC SUPPLY
YEAR: 1985

MEDICAID

STATE	SNF (DAYS)	ICF (DAYS)	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER
ALABAMA	2444972.	2395033.	12247.	0.	0.	0.
ALASKA	30517.	118680.	322.	162.	0.	0.
ARIZONA	0.	0.	0.	0.	0.	0.
ARKANSAS	739474.	4688195.	944.	0.	0.	0.
CALIFORNIA	23743552.	1484580.	15035.	0.	0.	0.
COLORADO	1301454.	2296916.	3272.	1815.	0.	0.
CONNECTICUT	4656635.	834859.	239086.	2592.	0.	0.
DELAWARE	15195.	245553.	347.	494.	0.	0.
DIST OF COLUMBIA	33295.	176984.	2393.	423.	0.	0.
FLORIDA	2609414.	3326797.	8341.	514.	0.	0.
GEORGIA	3710266.	5558830.	5833.	3239.	0.	0.
HAWAII	413497.	403695.	1114.	0.	0.	0.
IDAH0	311584.	534279.	690.	892.	0.	0.
ILLINOIS	3801788.	1401787.	7171.	0.	0.	0.
INDIANA	1138429.	5916049.	3116.	1027.	0.	0.
IOWA	32266.	5357437.	6424.	1566.	0.	0.
KANSAS	144132.	4079768.	1116.	1749.	0.	0.
KENTUCKY	846469.	2517200.	18410.	625.	0.	0.
LOUISIANA	235008.	5133344.	4354.	3737.	0.	0.
MAINE	92312.	2205001.	1954.	0.	0.	0.
MARYLAND	1347310.	2325747.	3480.	0.	0.	0.
MASSACHUSETTS	4639939.	5822341.	44429.	4756.	0.	0.
MICHIGAN	6029839.	5203759.	6966.	5087.	0.	0.
MINNESOTA	4709425.	5526697.	8786.	13063.	0.	0.
MISSISSIPPI	2426326.	648862.	46963.	706.	0.	0.
MISSOURI	105700.	3672365.	9669.	1527.	0.	0.
MONTANA	162238.	1047848.	2212.	303.	0.	0.
NEBRASKA	218797.	2545189.	18868.	919.	0.	0.
NEVADA	218439.	250587.	292.	0.	0.	0.
NEW HAMPSHIRE	35719.	1379587.	3407.	0.	0.	0.
NEW JERSEY	290059.	7480019.	37050.	0.	0.	0.
NEW MEXICO	14142.	601788.	5017.	441.	0.	0.
NEW YORK	15458031.	9405740.	2132145.	15996.	0.	0.
NORTH CAROLINA	1625525.	2353617.	2437.	1908.	0.	0.
NORTH DAKOTA	636835.	476559.	141.	0.	0.	0.
OHIO	7114595.	4685069.	6657.	3514.	0.	0.
OKLAHOMA	1194.	5689715.	38.	1906.	0.	0.
OREGON	229704.	2505122.	937.	2765.	0.	0.
PENNSYLVANIA	790788.	3791969.	82199.	10150.	0.	0.
RHODE ISLAND	556760.	1155199.	1264.	3349.	0.	0.
SOUTH CAROLINA	1637865.	912067.	2399.	1073.	0.	0.
SOUTH DAKOTA	216012.	1267763.	160.	575.	0.	0.
TENNESSEE	114594.	5215319.	6644.	2137.	0.	0.
TEXAS	1691048.	20579040.	26031.	8447.	0.	0.
UTAH	431750.	759846.	381.	2384.	0.	0.
VERMONT	35317.	681243.	5932.	601.	0.	0.
VIRGINIA	197244.	3817832.	5380.	2732.	0.	0.
WASHINGTON	5010559.	1491597.	7969.	473.	0.	0.
WEST VIRGINIA	8178.	236220.	1405.	0.	0.	0.
WISCONSIN	14628050.	593219.	90893.	3511.	0.	0.
WYOMING	113357.	282007.	264.	0.	0.	0.
NATIONAL TOTAL	124712556.	164698704.	2892683.	107203.	0.	0.

LIC UTILIZATION
YEAR: 1985

MEDICARE

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STATE	SNF (DAYS)	ICF (DAYS)	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL
ALABAMA	2444971.	2395032.	5732.	0.	0.	0.	91042.
ALASKA	30517.	118680.	322.	162.	0.	0.	1378.
ARIZONA	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	739474.	4688193.	944.	0.	0.	0.	7372.
CALIFORNIA	23743552.	1484579.	15035.	0.	0.	0.	222630.
COLORADO	1301452.	2296915.	3272.	1615.	0.	0.	43063.
CONNECTICUT	4656634.	834859.	91471.	2592.	0.	0.	20112.
DELAWARE	15198.	245553.	347.	485.	0.	0.	677.
DIST OF COLUMBIA	33295.	176984.	2393.	423.	0.	0.	5275.
FLORIDA	2609413.	3326796.	8341.	513.	0.	0.	109103.
GEORGIA	3710265.	5559830.	5933.	2550.	0.	0.	95469.
HAWAII	413497.	403695.	1114.	0.	0.	0.	6223.
IDAH0	311584.	534279.	690.	661.	0.	0.	4270.
ILLINOIS	3801787.	14017885.	7171.	0.	0.	0.	42013.
INDIANA	1139429.	5916049.	3116.	0.	0.	0.	28914.
IOWA	32266.	5357435.	6424.	1566.	0.	0.	1688.
KANSAS	144162.	4079788.	1116.	1749.	0.	0.	2932.
KENTUCKY	846469.	1861591.	18410.	625.	0.	0.	10154.
LOUISIANA	235008.	6133343.	4354.	3737.	0.	0.	3904.
MAINE	92312.	2205001.	1464.	0.	0.	0.	440.
MARYLAND	1347309.	2325746.	3430.	0.	0.	0.	13974.
MASSACHUSETTS	4639937.	5822340.	44428.	4312.	0.	0.	26770.
MICHIGAN	6629838.	5203759.	5956.	5087.	0.	0.	28246.
MINNESOTA	4709424.	5526897.	8736.	13063.	0.	0.	15533.
MISSISSIPPI	2426325.	648862.	4992.	706.	0.	0.	30961.
MISSOURI	105700.	3672365.	9669.	1527.	0.	0.	14067.
MONTANA	162238.	1047848.	2212.	303.	0.	0.	13688.
NEBRASKA	218797.	1571725.	14428.	919.	0.	0.	436.
NEVADA	218439.	250587.	292.	0.	0.	0.	14334.
NEW HAMPSHIRE	35719.	1379586.	3437.	0.	0.	0.	1519.
NEW JERSEY	290059.	7480015.	37060.	0.	0.	0.	12306.
NEW MEXICO	14142.	601783.	5017.	441.	0.	0.	497.
NEW YORK	15458030.	9405741.	381167.	15996.	0.	0.	194199.
NORTH CAROLINA	1625624.	2353617.	2437.	1904.	0.	0.	38946.
NORTH DAKOTA	636335.	476559.	181.	0.	0.	0.	1919.
OHIO	7114594.	4685067.	5657.	2112.	0.	0.	136314.
OKLAHOMA	1194.	5688715.	38.	1906.	0.	0.	494.
OREGON	229704.	2505121.	937.	2765.	0.	0.	5439.
PENNSYLVANIA	7907839.	3791968.	59957.	10150.	0.	0.	210569.
RHODE ISLAND	556760.	1155198.	1264.	3349.	0.	0.	5274.
SOUTH CAROLINA	1637854.	912067.	2399.	953.	0.	0.	35758.
SOUTH DAKOTA	216012.	1267762.	160.	575.	0.	0.	8038.
TENNESSEE	114694.	5215318.	5644.	2137.	0.	0.	90815.
TEXAS	1691046.	20579024.	26031.	8447.	0.	0.	51782.
UTAH	431750.	759846.	331.	1662.	0.	0.	3551.
VERMONT	35317.	643060.	5774.	374.	0.	0.	1747.
VIRGINIA	197244.	3817831.	5390.	2782.	0.	0.	2320.
WASHINGTON	5010657.	1491597.	5802.	473.	0.	0.	57580.
WEST VIRGINIA	8174.	236270.	1405.	0.	0.	0.	6429.
WISCONSIN	14121300.	598219.	54592.	3511.	0.	0.	0.
WYOMING	35818.	282007.	254.	0.	0.	0.	0.
NATIONAL TOTAL	124128336.	163031408.	884394.	102354.	0.	0.	1720555.

LTC RECIPIENTS
YEAR: 1985

MEDICAL

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	11319.	10551.	5732.	0.	0.	0.	11380.	39983.
ALASKA	315.	663.	322.	162.	0.	0.	172.	1634.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	3872.	18101.	964.	0.	0.	0.	922.	23338.
CALIFORNIA	135677.	9221.	15035.	0.	0.	0.	27829.	187762.
COLORADO	11725.	12977.	3272.	1815.	0.	0.	5383.	35172.
CONNECTICUT	21361.	4346.	91471.	2592.	0.	0.	2514.	122286.
DELAWARE	95.	998.	347.	485.	0.	0.	85.	2012.
DIST OF COLUMBIA	273.	592.	2393.	423.	0.	0.	659.	4340.
FLORIDA	13382.	15692.	6341.	513.	0.	0.	13538.	51566.
GEORGIA	18277.	41796.	5833.	2550.	0.	0.	11933.	80389.
HAWAII	2757.	1789.	1114.	0.	0.	0.	774.	6637.
IDAH0	1566.	2079.	690.	681.	0.	0.	534.	5550.
ILLINOIS	22103.	59851.	7171.	0.	0.	0.	5252.	94177.
INDIANA	7251.	21670.	3116.	0.	0.	0.	3614.	35652.
IOWA	454.	19990.	6424.	1566.	0.	0.	211.	28646.
KANSAS	994.	15338.	1116.	1749.	0.	0.	306.	19563.
KENTUCKY	5961.	8348.	18410.	625.	0.	0.	1269.	34613.
LOUISIANA	1094.	25450.	4354.	3737.	0.	0.	488.	35127.
MAINE	632.	7135.	1964.	0.	0.	0.	55.	9787.
MARYLAND	6238.	9121.	3480.	0.	0.	0.	1747.	20585.
MASSACHUSETTS	26214.	28967.	44429.	4312.	0.	0.	3346.	107267.
MICHIGAN	30412.	23025.	6956.	5087.	0.	0.	3531.	69021.
MINNESOTA	19705.	21589.	8786.	13063.	0.	0.	1942.	65084.
MISSISSIPPI	9404.	2738.	4992.	706.	0.	0.	3870.	21710.
MISSOURI	766.	15306.	9669.	1527.	0.	0.	1758.	29086.
MONTANA	1248.	5038.	2212.	303.	0.	0.	1711.	10512.
NEBRASKA	1216.	5573.	14428.	919.	0.	0.	105.	22240.
NEVADA	1071.	1197.	292.	0.	0.	0.	1792.	4353.
NEW HAMPSHIRE	586.	4841.	3487.	0.	0.	0.	190.	9103.
NEW JERSEY	2501.	28015.	37060.	0.	0.	0.	1538.	69114.
NEW MEXICO	236.	2333.	5017.	441.	0.	0.	62.	8084.
NEW YORK	81358.	89578.	381166.	15996.	0.	0.	24275.	592373.
NORTH CAROLINA	12907.	15285.	2437.	1908.	0.	0.	4868.	37398.
NORTH DAKOTA	2274.	1862.	181.	0.	0.	0.	240.	4557.
OHIO	28921.	18089.	6667.	2112.	0.	0.	17039.	72828.
OKLAHOMA	3.	24311.	38.	1906.	0.	0.	62.	26325.
OREGON	2098.	11036.	987.	2765.	0.	0.	680.	17556.
PENNSYLVANIA	43450.	21668.	59957.	10150.	0.	0.	26321.	161546.
RHODE ISLAND	3813.	13752.	1264.	3349.	0.	0.	659.	22638.
SOUTH CAROLINA	8399.	3983.	2399.	953.	0.	0.	4470.	20204.
SOUTH DAKOTA	1049.	4839.	169.	575.	0.	0.	1005.	7627.
TENNESSEE	4987.	21640.	6644.	2137.	0.	0.	11352.	46760.
TEXAS	12620.	81020.	26031.	4447.	0.	0.	6473.	135590.
UTAH	2116.	2825.	381.	1662.	0.	0.	444.	7428.
VERMONT	436.	2691.	5774.	374.	0.	0.	218.	9492.
VIRGINIA	1351.	14793.	5380.	2782.	0.	0.	290.	24601.
WASHINGTON	19365.	6215.	5802.	473.	0.	0.	7198.	39034.
WEST VIRGINIA	146.	1263.	1405.	0.	0.	0.	804.	3618.
WISCONSIN	6418.	2310.	54592.	3511.	0.	0.	0.	128601.
WYOMING	127.	640.	264.	0.	0.	0.	0.	1071.
NATIONAL TOTAL	648249.	762233.	884394.	102354.	0.	0.	215069.	2612263.

LTC EXPENDITURES (\$1000)
YEAR: 1985

MEDICAID, FEDERAL SHARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	6592.	60495.	4403.	0.	0.	0.	5611.	137501.
ALASKA	3055.	6925.	60.	2998.	0.	0.	135.	13184.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	20344.	160561.	312.	0.	0.	0.	490.	182278.
CALIFORNIA	661734.	32419.	3042.	0.	0.	0.	19855.	716050.
COLORADO	26274.	39871.	35.	16742.	0.	0.	2842.	85764.
CONNECTICUT	156245.	16715.	7256.	5665.	0.	0.	1520.	187472.
DELAWARE	326.	7397.	226.	1913.	0.	0.	50.	9911.
DIST OF COLUMBIA	1005.	3749.	1850.	11981.	0.	0.	469.	19054.
FLORIDA	55009.	64117.	2277.	6523.	0.	0.	7538.	136564.
GEORGIA	74140.	221140.	3124.	66245.	0.	0.	6013.	370666.
HAWAII	23604.	18295.	449.	0.	0.	0.	460.	42808.
IDAH0	7946.	12819.	405.	15415.	0.	0.	307.	36891.
ILLINOIS	84203.	227116.	2298.	0.	0.	0.	3142.	316759.
INDIANA	37316.	125529.	1954.	0.	0.	0.	1854.	166667.
IOWA	1152.	101136.	1462.	41523.	0.	0.	106.	145378.
KANSAS	3431.	72631.	404.	24639.	0.	0.	174.	101280.
KENTUCKY	40134.	53186.	11844.	27743.	0.	0.	715.	133621.
LOUISIANA	5050.	157549.	2363.	78716.	0.	0.	248.	243907.
MAINE	4602.	78648.	1247.	0.	0.	0.	41.	84537.
MARYLAND	37121.	51391.	1036.	0.	0.	0.	986.	97135.
MASSACHUSETTS	145761.	172792.	18517.	127740.	0.	0.	2325.	467135.
MICHIGAN	216049.	139499.	2327.	80371.	0.	0.	2234.	440480.
MINNESOTA	142752.	110213.	4560.	134453.	0.	0.	982.	392960.
MISSISSIPPI	71879.	17837.	1147.	9253.	0.	0.	1927.	102044.
MISSOURI	1930.	72590.	1892.	34084.	0.	0.	939.	111495.
MONTANA	4252.	25750.	1148.	6925.	0.	0.	1053.	39128.
NEBRASKA	6125.	23214.	6004.	20089.	0.	0.	53.	60485.
NEVADA	5254.	5597.	233.	0.	0.	0.	1000.	12083.
NEW HAMPSHIRE	1634.	40551.	991.	0.	0.	0.	126.	43352.
NEW JERSEY	8756.	209847.	22041.	0.	0.	0.	956.	241639.
NEW MEXICO	609.	16462.	2353.	6113.	0.	0.	36.	25655.
NEW YORK	1086527.	470252.	305393.	248803.	0.	0.	17104.	2128076.
NORTH CAROLINA	63357.	91541.	142.	7860.	0.	0.	2366.	165766.
NORTH DAKOTA	19479.	10123.	81.	0.	0.	0.	91.	29774.
OHIO	164220.	89383.	1709.	29294.	0.	0.	10409.	295014.
OKLAHOMA	33.	141322.	1.	51737.	0.	0.	31.	193124.
OREGON	4616.	42794.	238.	33662.	0.	0.	425.	81596.
PENNSYLVANIA	203303.	85203.	8437.	126999.	0.	0.	16705.	440646.
RHODE ISLAND	20584.	39395.	238.	28942.	0.	0.	506.	89744.
SOUTH CAROLINA	65942.	29119.	1047.	16871.	0.	0.	2299.	115318.
SOUTH DAKOTA	4357.	24621.	13.	9520.	0.	0.	537.	39048.
TENNESSEE	4220.	154837.	2332.	36458.	0.	0.	6188.	204035.
TEXAS	42283.	401861.	11832.	96105.	0.	0.	2919.	555001.
UTAH	15822.	23848.	248.	4723.	0.	0.	287.	49928.
VERMONT	1532.	24799.	3079.	6977.	0.	0.	152.	36538.
VIRGINIA	10149.	129151.	2940.	35962.	0.	0.	144.	178396.
WASHINGTON	79085.	21659.	2325.	10144.	0.	0.	4074.	117287.
WEST VIRGINIA	272.	7953.	815.	0.	0.	0.	481.	9520.
WISCONSIN	392283.	11746.	11740.	106762.	0.	0.	0.	522581.
WYOMING	594.	4507.	820.	0.	0.	0.	0.	5924.
NATIONAL TOTAL	4094706.	4166135.	461016.	1569884.	0.	0.	128918.	10420598.

LIC EXPENDITURES (\$1000)
YEAR: 1985

MEDICAID, STATE SHARE

E-29

STATE	SF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	28282	25926	1887	0	0	0	2833	53929
ALASKA	3055	6925	60	2998	0	0	135	13184
ARIZONA	0	0	0	0	0	0	0	0
ARKANSAS	8026	61823	147	0	0	0	189	70185
CALIFORNIA	661754	32419	3042	0	0	0	1855	716050
COLORADO	24282	36848	32	15473	0	0	2627	79262
CONNECTICUT	156285	16715	7286	5866	0	0	1520	187472
DELAWARE	326	7397	226	1913	0	0	50	9911
DIST OF COLUMBIA	1005	3749	1850	11931	0	0	463	19054
FLORIDA	40144	45955	1632	4747	0	0	5403	97881
GEORGIA	38142	113762	1609	34080	0	0	3094	190694
HAWAII	23604	18295	449	0	0	0	460	42808
IDAHU	4528	7305	231	8784	0	0	175	21023
ILLINOIS	84203	227115	2298	0	0	0	3142	316759
INDIANA	28953	97395	1519	0	0	0	1447	129314
IOWA	955	83858	1212	34429	0	0	87	120541
KANSAS	2800	59282	330	20111	0	0	142	82665
KENTUCKY	19803	26243	5844	13689	0	0	353	65933
LOUISIANA	2596	80981	1204	40461	0	0	128	125369
MAINE	1924	32378	521	0	0	0	17	35340
MARYLAND	37721	57391	1036	0	0	0	986	97135
MASSACHUSETTS	124818	147965	15856	109337	0	0	1991	400018
MICHIGAN	216049	139499	2327	80371	0	0	2234	440480
MINNESOTA	121115	93508	3859	114074	0	0	833	333398
MISSISSIPPI	21921	5440	350	2822	0	0	589	31121
MISSOURI	1281	46743	1218	21947	0	0	605	71794
MONTANA	2318	14037	626	3775	0	0	574	21329
NEBRASKA	4350	20091	4273	14296	0	0	38	43050
NEVADA	5254	5597	233	0	0	0	1000	12083
NEW HAMPSHIRE	1113	26810	655	0	0	0	83	28661
NEW JERSEY	8756	209347	22081	0	0	0	956	241639
NEW MEXICO	324	7747	1107	2577	0	0	18	12073
NEW YORK	1053567	455937	296129	241255	0	0	16585	2063525
NORTH CAROLINA	30742	44418	69	3614	0	0	1148	80191
NORTH DAKOTA	13193	5856	55	0	0	0	62	20165
OHIO	13710	74954	1432	24555	0	0	8729	247391
OKLAHOMA	20	84860	0	31068	0	0	19	115974
OREGON	4174	38194	213	29855	0	0	380	72825
PENNSYLVANIA	160708	67436	6673	100516	0	0	13221	348759
RHODE ISLAND	14202	27207	206	29015	0	0	349	61979
SOUTH CAROLINA	27315	12062	450	6949	0	0	952	47768
SOUTH DAKOTA	2035	11666	6	4511	0	0	254	18502
TENNESSEE	1496	73301	1104	17260	0	0	2930	96591
TEXAS	33123	314652	9270	75297	0	0	2287	434834
UTAH	7415	13519	116	2214	0	0	134	23399
VIRGINIA	724	11718	1455	3297	0	0	72	17260
WASHINGTON	7884	100329	2323	27936	0	0	112	134583
WEST VIRGINIA	79085	21649	2325	10146	0	0	407	117287
WISCONSIN	136	3986	409	0	0	0	241	4772
WYOMING	279655	8374	8405	76112	0	0	0	372556
	598	4507	820	0	0	0	0	5924
NATIONAL TOTAL	3530199	3135415	416477	1219738	0	0	102579	8403339

LTC EXPENDITURES (\$1000)
YEAR: 1985

MEDICAL, TOTAL

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOME MAKER	HOSPITAL	TOTAL
ALABAMA	94275.	86421.	6290.	0.	0.	0.	9445.	196430.
ALASKA	6130.	13851.	120.	5997.	0.	0.	269.	26368.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	28870.	222383.	530.	0.	0.	0.	679.	252462.
CALIFORNIA	1323468.	64838.	6035.	0.	0.	0.	37709.	1432099.
COLORADO	50556.	76719.	67.	32215.	0.	0.	5469.	165026.
CONNECTICUT	312569.	33431.	14571.	11333.	0.	0.	3040.	374945.
DELAWARE	552.	14793.	453.	3826.	0.	0.	99.	19823.
DIST OF COLUMBIA	2010.	7498.	3701.	23961.	0.	0.	939.	38109.
FLORIDA	96153.	110072.	3909.	11370.	0.	0.	12941.	234445.
GEORGIA	112282.	334909.	4737.	100325.	0.	0.	9107.	561359.
HAWAII	47207.	36590.	899.	0.	0.	0.	921.	85617.
IDAH0	12474.	20124.	635.	24199.	0.	0.	482.	57914.
ILLINOIS	168406.	454233.	4526.	0.	0.	0.	6284.	633519.
INDIANA	66268.	222925.	3477.	0.	0.	0.	3311.	295980.
IOWA	2107.	184994.	2674.	75952.	0.	0.	193.	265920.
KANSAS	6231.	131913.	734.	44750.	0.	0.	317.	183945.
KENTUCKY	59937.	79429.	17538.	41433.	0.	0.	1067.	199554.
LOUISIANA	7645.	238529.	3548.	119177.	0.	0.	376.	369276.
MAINE	6525.	111525.	1759.	0.	0.	0.	58.	119877.
MARYLAND	75443.	114782.	2073.	0.	0.	0.	1972.	194270.
MASSACHUSETTS	270579.	320756.	3473.	237127.	0.	0.	4315.	867152.
MICHIGAN	432098.	278998.	4655.	160742.	0.	0.	4469.	890961.
MINNESOTA	263867.	203720.	3429.	248527.	0.	0.	1815.	726358.
MISSISSIPPI	93601.	23277.	1497.	12075.	0.	0.	2515.	133165.
MISSOURI	3271.	119333.	3110.	56031.	0.	0.	1544.	183289.
MONTANA	6572.	39787.	1773.	10700.	0.	0.	1628.	60457.
NEBRASKA	10485.	48295.	10277.	34386.	0.	0.	90.	103534.
NEVADA	10508.	11194.	465.	0.	0.	0.	2000.	24167.
NEW HAMPSHIRE	2797.	67361.	1546.	0.	0.	0.	209.	72012.
NEW JERSEY	17511.	419694.	44161.	0.	0.	0.	1913.	483279.
NEW MEXICO	1014.	24209.	3460.	8949.	0.	0.	56.	37727.
NEW YORK	2140097.	926239.	601522.	490058.	0.	0.	33690.	4191603.
NORTH CAROLINA	94100.	135959.	211.	11674.	0.	0.	3514.	245457.
NORTH DAKOTA	32672.	16979.	136.	0.	0.	0.	153.	49939.
OHIO	301930.	164337.	3140.	53860.	0.	0.	19138.	542405.
OKLAHOMA	54.	226188.	1.	82605.	0.	0.	50.	309098.
OREGON	8850.	80938.	451.	63327.	0.	0.	805.	154421.
PENNSYLVANIA	364211.	152639.	15115.	227514.	0.	0.	29926.	789405.
RHODE ISLAND	34755.	66602.	503.	48997.	0.	0.	955.	151723.
SOUTH CAROLINA	93257.	41180.	1538.	23860.	0.	0.	3251.	163086.
SOUTH DAKOTA	6427.	36287.	19.	14031.	0.	0.	791.	57550.
TENNESSEE	6217.	228137.	3436.	53718.	0.	0.	9114.	300626.
TEXAS	75611.	716713.	21102.	171602.	0.	0.	5206.	989835.
UTAH	23237.	42367.	365.	6937.	0.	0.	421.	73327.
VERMONT	2256.	36517.	4534.	10273.	0.	0.	223.	53804.
VIRGINIA	18033.	279480.	5313.	63898.	0.	0.	256.	316979.
WASHINGTON	158159.	43318.	4650.	20289.	0.	0.	8147.	234573.
WEST VIRGINIA	408.	11939.	1224.	0.	0.	0.	722.	14293.
WISCONSIN	671948.	20420.	20196.	182674.	0.	0.	0.	895137.
WYOMING	1195.	9013.	1690.	0.	0.	0.	0.	11849.
NATIONAL TOTAL	7624919.	7301569.	877494.	2788622.	0.	0.	0.	0.

MILICIAID

LTC. DEPEND
YEAR: 1990

STATE	SHE	ICF	HOMEL HEALTH	ICF/MR	PERSONAL CARE	HOME MAKER	HOSPITAL	TOTAL
ALABAMA	21934528.	13883891.	8766.	17283.	0.	0.	0.	35844448.
ALASKA	199556.	72583.	2564.	795.	0.	0.	0.	275498.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	2982547.	4703242.	36090.	0.	0.	0.	0.	7721879.
CALIFORNIA	55903536.	39522704.	44938.	0.	0.	0.	0.	86471216.
COLORADO	9007681.	5319218.	45463.	5557.	0.	0.	0.	12077917.
CONNECTICUT	9190214.	5162600.	145168.	5997.	0.	0.	0.	14503977.
DELAWARE	169595.	587910.	4714.	742.	0.	0.	0.	762961.
DIST OF COLUMBIA	224252.	1202613.	8151.	595.	0.	0.	0.	1435619.
FLORIDA	32952272.	10317950.	56273.	981.	0.	0.	0.	43327472.
GEORGIA	34123632.	4426228.	69730.	4000.	0.	0.	0.	38623584.
HAWAII	1654853.	1267469.	2522.	0.	0.	0.	0.	2925144.
IDAHO	2004256.	803237.	5628.	1138.	0.	0.	0.	2815257.
ILLINOIS	15279409.	23256880.	120603.	0.	0.	0.	0.	38657280.
INDIANA	8027319.	9910824.	73455.	0.	0.	0.	0.	18011568.
IOWA	229051.	8852425.	57280.	2887.	0.	0.	0.	9141643.
KANSAS	720687.	3845649.	24358.	3674.	0.	0.	0.	4594368.
KENTUCKY	3051311.	3528901.	26318.	903.	0.	0.	0.	6619432.
LOUISIANA	1324566.	7760985.	69719.	7263.	0.	0.	0.	9162472.
MAINE	266421.	2790166.	13138.	0.	0.	0.	0.	3069724.
MARYLAND	5704759.	3335823.	26516.	0.	0.	0.	0.	9067103.
MASSACHUSETTS	14213576.	10071642.	32225.	5469.	0.	0.	0.	24377992.
MICHIGAN	19264895.	5743830.	51058.	7580.	0.	0.	0.	25117344.
MINNESOTA	15422998.	5416503.	48806.	22353.	0.	0.	0.	21310656.
MISSISSIPPI	1066798.	4892491.	7632.	1364.	0.	0.	0.	15568284.
MISSOURI	2299892.	5413441.	36336.	2900.	0.	0.	0.	7753069.
MONTANA	2052965.	1123584.	10693.	508.	0.	0.	0.	3187748.
NEBRASKA	61752.	3060875.	22335.	1288.	0.	0.	0.	3702849.
NEVADA	2929667.	2037894.	793.	0.	0.	0.	0.	4968354.
NEW HAMPSHIRE	178752.	2679336.	19532.	0.	0.	0.	0.	2877619.
NEW JERSEY	2444018.	1409179.	92668.	0.	0.	0.	0.	16628484.
NEW MEXICO	73983.	1163673.	10039.	811.	0.	0.	0.	1248505.
NEW YORK	48244676.	31499104.	559678.	23246.	0.	0.	0.	80330496.
NORTH CAROLINA	3419904.	3365315.	30692.	3852.	0.	0.	0.	11819762.
NORTH DAKOTA	1849084.	579036.	1133.	0.	0.	0.	0.	2432251.
OHIO	43971264.	28775376.	16895.	3206.	0.	0.	0.	72764720.
OKLAHOMA	70579.	7796106.	81839.	3035.	0.	0.	0.	7951659.
OREGON	1714165.	6405650.	52064.	7741.	0.	0.	0.	8179679.
PENNSYLVANIA	36103944.	18636960.	92197.	27428.	0.	0.	0.	54860960.
RHODE ISLAND	1912261.	1098224.	24673.	6342.	0.	0.	0.	3042100.
SOUTH CAROLINA	8659335.	5825157.	7277.	1443.	0.	0.	0.	14692910.
SOUTH DAKOTA	2308904.	2180030.	15790.	1105.	0.	0.	0.	4506829.
TENNESSEE	337743.	27796096.	195639.	5922.	0.	0.	0.	28335376.
TEXAS	12561656.	35318592.	297504.	16089.	0.	0.	0.	48193940.
UTAH	1845370.	1105178.	9400.	2324.	0.	0.	0.	2982770.
VERMONT	2244451.	1326203.	494.	494.	0.	0.	0.	1559568.
VIRGINIA	815419.	4247444.	33693.	6375.	0.	0.	0.	5107929.
WASHINGTON	17947648.	9502411.	7350.	1029.	0.	0.	0.	27460416.
WEST VIRGINIA	56407.	1259084.	11423.	0.	0.	0.	0.	1356913.
WISCONSIN	22885216.	10730069.	90122.	5104.	0.	0.	0.	33710496.
WYOMING	113648.	423027.	2817.	0.	0.	0.	0.	599551.
NATIONAL TOTAL	485368320.	393354240.	2770512.	209293.	0.	0.	0.	881691136.

LIC SUPPLY
YEAR: 1990

MEDICAID

STATE	SNF (DAYS)	ICF (DAYS)	HOME HEALTH	ICF/NR	PERSONAL CARE	HOMEMAKER
ALABAMA	2444972.	2395033.	35472.	0.	0.	0.
ALASKA	30517.	116680.	970.	162.	0.	0.
ARIZONA	0.	0.	0.	0.	0.	0.
ARKANSAS	739474.	4588195.	2000.	0.	0.	0.
CALIFORNIA	23743552.	1484580.	17011.	0.	0.	0.
COLORADO	1301454.	2296916.	5030.	1315.	0.	0.
DELAWARE	15192.	245553.	533.	494.	0.	0.
DIST OF COLUMBIA	33295.	176984.	2774.	+23.	0.	0.
FLORIDA	2609414.	3326797.	29913.	514.	0.	0.
GEORGIA	3710250.	5558830.	14944.	3239.	0.	0.
HAWAII	413497.	403695.	1675.	0.	0.	0.
IDAH0	311584.	534279.	1565.	892.	0.	0.
ILLINOIS	3801789.	14017887.	9283.	0.	0.	0.
INDIANA	1138429.	5916049.	3846.	1027.	0.	0.
IOWA	32266.	5357437.	31805.	1566.	0.	0.
KANSAS	144162.	4079788.	2021.	1749.	0.	0.
KENTUCKY	846469.	2517200.	47359.	625.	0.	0.
LOUISIANA	235008.	6133344.	10655.	3737.	0.	0.
MAINE	92312.	2205001.	2339.	0.	0.	0.
MARYLAND	1347310.	2325747.	4769.	0.	0.	0.
MASSACHUSETTS	4639939.	5822341.	80417.	4756.	0.	0.
MICHIGAN	6629839.	5203759.	11951.	5087.	0.	0.
MINNESOTA	4709425.	5526697.	17291.	13063.	0.	0.
MISSISSIPPI	2426326.	648862.	351895.	706.	0.	0.
MISSOURI	105700.	3672365.	35079.	1527.	0.	0.
MONTANA	162238.	1047348.	6053.	303.	0.	0.
NEBRASKA	218797.	2545189.	124313.	919.	0.	0.
NEVADA	218439.	250587.	527.	0.	0.	0.
NEW HAMPSHIRE	35719.	1379587.	5006.	0.	0.	0.
NEW JERSEY	290059.	7480019.	142974.	0.	0.	0.
NEW MEXICO	14142.	601788.	20150.	441.	0.	0.
NEW YORK	15458031.	9405740.	9384838.	15996.	0.	0.
NORTH CAROLINA	1625625.	2353617.	5412.	1908.	0.	0.
NORTH DAKOTA	636835.	475559.	263.	0.	0.	0.
OHIO	7114595.	4685069.	8922.	3514.	0.	0.
OKLAHOMA	1194.	5698715.	137.	1906.	0.	0.
OREGON	229704.	2505122.	1234.	2765.	0.	0.
PENNSYLVANIA	7907488.	3791969.	213204.	10150.	0.	0.
RHODE ISLAND	556750.	1155199.	1457.	3349.	0.	0.
SOUTH CAROLINA	1637805.	912067.	2419.	1073.	0.	0.
SOUTH DAKOTA	215012.	1267763.	227.	575.	0.	0.
TENNESSEE	114694.	5215319.	17021.	2137.	0.	0.
TEXAS	1691048.	20579040.	152955.	8447.	0.	0.
UTAH	431750.	759846.	544.	2384.	0.	0.
VERMONT	35317.	681243.	13515.	601.	0.	0.
VIRGINIA	197244.	3817832.	10581.	2782.	0.	0.
WASHINGTON	5010659.	1491597.	17253.	473.	0.	0.
WEST VIRGINIA	3174.	236220.	4186.	0.	0.	0.
WISCONSIN	14628050.	598219.	34665.	3511.	0.	0.
WYOMING	113357.	282007.	523.	0.	0.	0.
NATIONAL TOTAL	124712656.	164698704.	11821911.	107203.	0.	0.

MEDICAID

LIC UTILIZATION
YEAR: 1990

STATE	SWF (DAYS)	ICF (DAYS)	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL
ALABAMA	244,497.	239,503.	3756.	0.	0.	0.	36,453.
ALASKA	30,517.	118,680.	970.	102.	0.	0.	4,209.
ARIZONA	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	7,394.74.	4,688,195.	2000.	0.	0.	0.	30,597.
CALIFORNIA	237,435.36.	14,845,79.	17,011.	0.	0.	0.	9,338,53.
COLORADO	1,301,453.	22,969,15.	5090.	1315.	0.	0.	188,345.
CONNECTICUT	4,656,634.	8,348,59.	14,516.7.	2,592.	0.	0.	110,976.
DELAWARE	151,198.	24,555.3.	533.	494.	0.	0.	6160.
DIST OF COLUMBIA	332,95.	17,6984.	2774.	423.	0.	0.	12,873.
FLORIDA	260,941.3.	33,267,96.	29,913.	514.	0.	0.	4,931,04.
GEORGIA	371,0265.	55,583,29.	14,944.	3239.	0.	0.	387,009.
HAWAII	413,497.	40,3695.	1675.	0.	0.	0.	31,876.
IDAHO	311,584.	53,427.9.	1565.	892.	0.	0.	24,043.
ILLINOIS	380,1788.	14,017,886.	9283.	0.	0.	0.	27,3554.
INDIANA	113,8429.	57,16048.	3846.	0.	0.	0.	15,1264.
IOWA	322,65.	53,57436.	31805.	1566.	0.	0.	41,002.
KANSAS	144,152.	40,797,87.	2021.	1749.	0.	0.	10,325.
KENTUCKY	846,469.	25,172,00.	28,318.	625.	0.	0.	51,783.
LOUISIANA	235,008.	61,33343.	10,655.	3737.	0.	0.	30,451.
MAINE	92,312.	22,050,00.	2389.	0.	0.	0.	7,992.
MARYLAND	134,7309.	23,25746.	4708.	0.	0.	0.	61,691.
MASSACHUSETTS	463,9938.	58,22340.	80,417.	4756.	0.	0.	19,3984.
MICHIGAN	662,9838.	52,03758.	11,951.	5087.	0.	0.	15,4415.
MINNESOTA	470,9424.	55,26697.	17,291.	13,063.	0.	0.	11,8262.
MISSISSIPPI	242,6324.	64,8862.	7632.	706.	0.	0.	12,8748.
MISSOURI	105,700.	36,72364.	35,079.	1527.	0.	0.	60,205.
MONTANA	162,238.	10,47849.	5053.	303.	0.	0.	38,321.
NEBRASKA	218,797.	25,45188.	22,835.	919.	0.	0.	10,470.
NEVADA	218,439.	25,0587.	527.	0.	0.	0.	55,996.
NEW HAMPSHIRE	35719.	13,79585.	5036.	0.	0.	0.	17,796.
NEW JERSEY	290,059.	74,80016.	92,688.	0.	0.	0.	11,1912.
NEW MEXICO	14142.	50,1788.	10039.	441.	0.	0.	8196.
NEW YORK	154,58030.	94,05740.	5,967.9.	15,996.	0.	0.	98,7046.
NORTH CAROLINA	162,5524.	23,53616.	5412.	1908.	0.	0.	15,5392.
NORTH DAKOTA	636835.	4,655070.	8922.	0.	0.	0.	12,164.
OHIO	711,4596.	46,85070.	263.	3206.	0.	0.	62,8040.
OKLAHOMA	1194.	56,89714.	137.	1906.	0.	0.	24,538.
OREGON	22,9734.	25,05121.	1284.	2765.	0.	0.	79415.
PENNSYLVANIA	790,7837.	37,91968.	92,197.	10150.	0.	0.	61,7958.
RHODE ISLAND	556,760.	11,55193.	1487.	3349.	0.	0.	23,874.
SOUTH CAROLINA	163,7864.	91,2067.	2919.	1073.	0.	0.	150,305.
SOUTH DAKOTA	216,012.	12,67162.	227.	575.	0.	0.	35,426.
TENNESSEE	114,694.	52,15313.	17021.	2137.	0.	0.	26,7060.
TEXAS	169,1048.	20,579024.	15,2955.	8447.	0.	0.	35,8771.
UTAH	431,750.	75,9846.	544.	2324.	0.	0.	20,900.
VERMONT	35317.	58,1243.	3407.	494.	0.	0.	12,963.
VIRGINIA	197,244.	39,17831.	10631.	2782.	0.	0.	15,158.
WASHINGTON	501,0659.	14,91596.	9350.	473.	0.	0.	21,4353.
WEST VIRGINIA	3178.	23,6220.	4126.	0.	0.	0.	16,855.
WISCONSIN	146,28049.	59,8219.	90122.	3511.	0.	0.	19,7885.
WYOMING	113,357.	28,2007.	523.	0.	0.	0.	1238.
NATIONAL TOTAL	12,471,2624.	164,698,672.	157,9301.	105,705.	0.	0.	793,3920.

LTC RECIPIENTS
YEAR: 1990

MEDICAID

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	11319.	10551.	8411.	0.	0.	0.	37282.	67564.
ALASKA	315.	663.	970.	162.	0.	0.	459.	2568.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	3877.	18101.	2000.	0.	0.	0.	3277.	27249.
CALIFORNIA	135677.	9221.	17011.	0.	0.	0.	85239.	247148.
COLORADO	11725.	12977.	5080.	1815.	0.	0.	17318.	48915.
CONNECTICUT	21361.	4348.	243676.	2592.	0.	0.	8710.	280687.
DELAWARE	98.	998.	533.	494.	0.	0.	584.	2707.
DIST OF COLUMBIA	273.	592.	2774.	423.	0.	0.	1423.	5485.
FLORIDA	13382.	15632.	6191.	514.	0.	0.	70366.	106145.
GEORGIA	18277.	41796.	14944.	3239.	0.	0.	41307.	119563.
HAWAII	2757.	1989.	1675.	0.	0.	0.	3080.	9500.
IDAHO	1566.	2079.	1565.	892.	0.	0.	2260.	8362.
ILLINOIS	22103.	59651.	9233.	0.	0.	0.	24144.	115181.
INDIANA	7251.	21671.	3846.	0.	0.	0.	15235.	48002.
IOWA	454.	19990.	31905.	1566.	0.	0.	2934.	56750.
KANSAS	994.	15338.	2021.	1749.	0.	0.	1098.	21200.
KENTUCKY	5961.	11288.	32441.	625.	0.	0.	9318.	59633.
LOUISIANA	1098.	25450.	10655.	3737.	0.	0.	2697.	43636.
MAINE	632.	7136.	2389.	0.	0.	0.	931.	11088.
MARYLAND	6238.	9121.	4768.	0.	0.	0.	5893.	26019.
MASSACHUSETTS	26214.	28967.	76404.	4756.	0.	0.	16369.	152710.
MICHIGAN	30412.	23025.	11951.	5087.	0.	0.	13531.	84007.
MINNESOTA	19705.	21589.	17291.	13063.	0.	0.	11779.	63426.
MISSISSIPPI	9404.	2738.	6611.	706.	0.	0.	14380.	33839.
MISSOURI	766.	15366.	35079.	1527.	0.	0.	5226.	57964.
MONTANA	1248.	5038.	6053.	303.	0.	0.	3861.	16502.
NEBRASKA	1216.	9025.	24033.	919.	0.	0.	577.	35771.
NEVADA	1071.	1199.	527.	0.	0.	0.	5596.	8393.
NEW HAMPSHIRE	586.	4841.	5006.	0.	0.	0.	1359.	11791.
NEW JERSEY	2501.	28015.	93286.	0.	0.	0.	9503.	133305.
NEW MEXICO	236.	2333.	10394.	441.	0.	0.	733.	14136.
NEW YORK	81358.	89578.	564604.	15996.	0.	0.	87385.	833922.
NORTH CAROLINA	12902.	15283.	5412.	1908.	0.	0.	14244.	49749.
NORTH DAKOTA	2274.	1862.	263.	0.	0.	0.	1492.	5891.
OHIO	28921.	18039.	8922.	3514.	0.	0.	63125.	122571.
OKLAHOMA	8.	24311.	137.	1906.	0.	0.	829.	27191.
OREGON	2088.	11036.	1284.	2765.	0.	0.	7144.	24317.
PENNSYLVANIA	43450.	21668.	77733.	10150.	0.	0.	65464.	218465.
RHODE ISLAND	3813.	13752.	1487.	3349.	0.	0.	1813.	24215.
SOUTH CAROLINA	8399.	3983.	2919.	1073.	0.	0.	16074.	32448.
SOUTH DAKOTA	1049.	4839.	227.	575.	0.	0.	3119.	9808.
TENNESSEE	4987.	21640.	17021.	2137.	0.	0.	25971.	71756.
TEXAS	12620.	81020.	152955.	8447.	0.	0.	34317.	289359.
UTAH	2116.	2825.	544.	2394.	0.	0.	1582.	9451.
VERMONT	436.	2850.	7705.	538.	0.	0.	953.	12482.
VIRGINIA	1351.	14798.	10681.	2782.	0.	0.	2090.	31702.
WASHINGTON	19346.	6215.	8300.	473.	0.	0.	21189.	56022.
WEST VIRGINIA	146.	1263.	4186.	0.	0.	0.	1027.	6623.
WISCONSIN	66491.	2310.	93861.	3511.	0.	0.	18285.	184458.
WYOMING	403.	680.	523.	0.	0.	0.	1280.	2886.
NATIONAL TOTAL	650868.	768785.	1647920.	106117.	0.	0.	0.	0.

MEDICAID, FEDERAL SHARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	99730.	91563.	9814.	0.	0.	0.	38319.	239477.
ALASKA	4775.	10880.	272.	4791.	0.	0.	614.	21333.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	34305.	261185.	1199.	0.	0.	0.	2991.	299679.
CALIFORNIA	1136454.	56162.	5177.	0.	0.	0.	118128.	1315929.
COLORADO	41428.	64360.	42.	25625.	0.	0.	18732.	151226.
CONNECTICUT	265424.	29039.	17390.	91213.	0.	0.	12530.	415597.
DELAWARE	504.	11495.	523.	3158.	0.	0.	676.	16355.
DIST OF COLUMBIA	1749.	6419.	3229.	20207.	0.	0.	1711.	33311.
FLORIDA	87973.	101276.	12406.	10827.	0.	0.	51393.	263875.
GEORGIA	113806.	339221.	11868.	133824.	0.	0.	35853.	634573.
HAWAII	40394.	31314.	1039.	0.	0.	0.	3602.	76348.
IDAH0	12569.	20252.	1394.	32901.	0.	0.	2674.	69789.
ILLINOIS	142853.	391111.	4474.	0.	0.	0.	30556.	569004.
INDIANA	57290.	193270.	3592.	0.	0.	0.	14397.	268555.
IOWA	1793.	157169.	10845.	66798.	0.	0.	3813.	240418.
KANSAS	5958.	125016.	1107.	43069.	0.	0.	923.	176083.
KENTUCKY	64036.	114476.	26070.	3850.	0.	0.	5179.	213612.
LOUISIANA	8236.	254366.	835.	126271.	0.	0.	2801.	400029.
MAINE	7652.	129143.	2253.	0.	0.	0.	1090.	140137.
MARYLAND	64253.	97082.	2136.	0.	0.	0.	6503.	169974.
MASSACHUSETTS	248054.	289819.	50262.	234173.	0.	0.	25082.	847369.
MICHIGAN	366292.	236516.	6035.	139111.	0.	0.	18245.	766270.
MINNESOTA	240075.	188548.	13418.	233097.	0.	0.	11102.	691239.
MISSISSIPPI	108677.	27270.	2579.	14453.	0.	0.	11706.	164697.
MISSOURI	3089.	111789.	10178.	54280.	0.	0.	5921.	185258.
MONTANA	6761.	42047.	4663.	11584.	0.	0.	4349.	69424.
NEBRASKA	10535.	78532.	14343.	34126.	0.	0.	992.	138529.
NEVADA	8057.	8674.	631.	0.	0.	0.	5834.	23196.
NEW HAMPSHIRE	2912.	67783.	2146.	0.	0.	0.	2206.	75048.
NEW JERSEY	13422.	325624.	83059.	0.	0.	0.	12989.	435074.
NEW MEXICO	1062.	25552.	7029.	9505.	0.	0.	923.	44395.
NEW YORK	1823452.	802503.	687324.	437146.	0.	0.	132327.	3882742.
NORTH CAROLINA	105647.	153174.	466.	10796.	0.	0.	13836.	283919.
NORTH DAKOTA	32877.	17268.	177.	0.	0.	0.	865.	51188.
OHIO	247414.	135311.	3371.	70440.	0.	0.	70249.	526783.
OKLAHOMA	56.	233408.	4.	85819.	0.	0.	2297.	321583.
OREGON	7329.	67748.	480.	55595.	0.	0.	9545.	140697.
PENNSYLVANIA	345077.	146748.	19230.	219169.	0.	0.	72162.	802386.
RHODE ISLAND	35029.	68715.	522.	48757.	0.	0.	3387.	156410.
SOUTH CAROLINA	101412.	44808.	1962.	40259.	0.	0.	14235.	192677.
SOUTH DAKOTA	6582.	37640.	27.	15149.	0.	0.	3480.	63078.
TENNESSEE	6521.	250741.	8766.	60466.	0.	0.	26460.	353334.
TEXAS	55478.	624734.	104333.	155000.	0.	0.	30151.	979726.
UTAH	26377.	47093.	529.	11749.	0.	0.	2501.	84250.
VERMONT	2697.	43907.	6592.	15674.	0.	0.	1668.	70639.
VIRGINIA	17139.	216237.	8008.	62859.	0.	0.	1402.	306544.
WASHINGTON	136438.	37547.	5634.	17255.	0.	0.	22651.	219525.
WEST VIRGINIA	430.	12523.	3451.	0.	0.	0.	1779.	18183.
WISCONSIN	683537.	19794.	27171.	178027.	0.	0.	20794.	929342.
WYOMING	2926.	7005.	2444.	0.	0.	0.	101.	12476.
NATIONAL TOTAL	6845611.	6854146.	1199033.	2773714.	0.	0.	881725.	18554928.

LIC EXPENDITURES (\$1000)
YEAR: 1990

MEDICAID, STATE SHARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	47301.	43406.	4653.	0.	0.	0.	18166.	113526.
ALASKA	4775.	10880.	212.	4791.	0.	0.	614.	21333.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	13992.	100526.	439.	0.	0.	0.	1220.	122226.
CALIFORNIA	1136454.	56162.	5177.	0.	0.	0.	118128.	1315929.
COLORADO	37538.	58394.	74.	24157.	0.	0.	16995.	137208.
CONNECTICUT	265424.	29039.	17390.	91213.	0.	0.	12530.	415597.
DELAWARE	504.	11495.	523.	3158.	0.	0.	676.	16355.
DIST OF COLUMBIA	1749.	5419.	3226.	20207.	0.	0.	1711.	33311.
FLORIDA	61564.	70875.	8682.	7577.	0.	0.	35965.	184563.
GEORGIA	61227.	182497.	6385.	71996.	0.	0.	19288.	341393.
HAWAII	38608.	29930.	993.	0.	0.	0.	3442.	72974.
IDAHO	6966.	11224.	713.	18235.	0.	0.	1482.	39680.
ILLINOIS	142853.	391111.	4474.	0.	0.	0.	30556.	569004.
INDIANA	45557.	154030.	2862.	0.	0.	0.	11474.	214023.
IOWA	1500.	131426.	9069.	55857.	0.	0.	3189.	201042.
KANSAS	4808.	100726.	892.	34701.	0.	0.	743.	141871.
KENTUCKY	36476.	65207.	14850.	2193.	0.	0.	2950.	121676.
LOUISIANA	4637.	143205.	4703.	71089.	0.	0.	1577.	225212.
MAINE	3339.	56354.	963.	0.	0.	0.	476.	61152.
MARYLAND	64253.	97082.	2136.	0.	0.	0.	6503.	169974.
MASSACHUSETTS	213958.	249981.	43336.	201985.	0.	0.	21635.	730894.
MICHIGAN	365292.	236616.	5005.	139111.	0.	0.	18245.	766270.
MINNESOTA	205327.	162043.	11532.	204627.	0.	0.	9541.	594070.
MISSISSIPPI	36361.	9126.	863.	4838.	0.	0.	3916.	55104.
MISSOURI	2061.	74548.	6791.	36217.	0.	0.	3951.	123609.
MONTANA	3831.	23754.	2634.	6544.	0.	0.	2457.	39221.
NEBRASKA	7434.	55413.	10121.	24079.	0.	0.	700.	97747.
NEVADA	8057.	8674.	631.	0.	0.	0.	5834.	23196.
NEW HAMPSHIRE	1909.	44440.	1407.	0.	0.	0.	1446.	49203.
NEW JERSEY	13402.	325624.	83059.	0.	0.	0.	12987.	435074.
NEW MEXICO	521.	12303.	3384.	4721.	0.	0.	447.	21375.
NEW YORK	1700807.	748527.	641094.	407733.	0.	0.	123427.	3621591.
NORTH CAROLINA	54230.	73627.	239.	5542.	0.	0.	7103.	145740.
NORTH DAKOTA	22120.	11618.	119.	0.	0.	0.	582.	34439.
OHIO	216429.	119365.	2949.	51618.	0.	0.	61451.	460812.
OKLAHOMA	35.	145809.	3.	53610.	0.	0.	1435.	200891.
OREGON	6153.	56881.	403.	46077.	0.	0.	8014.	118128.
PENNSYLVANIA	282222.	120016.	15727.	179242.	0.	0.	59018.	656233.
RHODE ISLAND	24747.	48546.	359.	34446.	0.	0.	2393.	110501.
SOUTH CAROLINA	44023.	19451.	852.	13136.	0.	0.	6179.	83641.
SOUTH DAKOTA	3268.	13790.	13.	7523.	0.	0.	1728.	31322.
TENNESSEE	3349.	128767.	4492.	31258.	0.	0.	13588.	181453.
TEXAS	51530.	491660.	82132.	121934.	0.	0.	23729.	771035.
UTAH	12636.	22561.	254.	5529.	0.	0.	1198.	42278.
VERMONT	1304.	21237.	3237.	7581.	0.	0.	807.	34166.
VIRGINIA	13384.	168869.	6957.	49089.	0.	0.	1095.	239394.
WASHINGTON	136438.	37547.	5634.	17255.	0.	0.	22651.	219525.
WEST VIRGINIA	253.	7370.	2031.	0.	0.	0.	1047.	10702.
WISCONSIN	490925.	14210.	19529.	127862.	0.	0.	14934.	667466.
WYOMING	2926.	7005.	2444.	0.	0.	0.	101.	12476.

LIC EXPENDITURES (\$1000)
YEAR: 1990

MEDICATION, TOTAL

STATE	SNF	ICF	HOME HEALTH	ICF/YR	PERSONAL CARE	HOME-MAKER	HOSPITAL	TOTAL
ALABAMA	147031.	134970.	14467.	0.	0.	0.	56485.	353003.
ALASKA	9551.	21761.	545.	9591.	0.	0.	1228.	42660.
ARIZONA	0.	0.	0.	0.	0.	0.	0.	0.
ARKANSAS	48297.	367710.	1588.	0.	0.	0.	4210.	421905.
CALIFORNIA	2272929.	112324.	19355.	0.	0.	0.	236255.	2631860.
COLORADO	79016.	122753.	157.	59781.	0.	0.	35727.	288435.
CONNECTICUT	530347.	58079.	34781.	142426.	0.	0.	25061.	831193.
DELAWARE	1007.	22990.	1045.	6316.	0.	0.	1351.	32709.
DIST OF COLUMBIA	3498.	12837.	6453.	40413.	0.	0.	3421.	66623.
FLORIDA	149537.	172151.	21047.	18405.	0.	0.	87358.	448537.
GEORGIA	175033.	521718.	13253.	205420.	0.	0.	55141.	975965.
HAWAII	79002.	61244.	2033.	0.	0.	0.	7044.	149322.
IDAHO	19535.	31470.	2156.	51137.	0.	0.	4156.	104470.
ILLINOIS	285725.	782223.	8949.	0.	0.	0.	61112.	1138007.
INDIANA	102948.	347305.	6454.	122655.	0.	0.	25871.	482578.
IOWA	3293.	268594.	19913.	77770.	0.	0.	7002.	441458.
KANSAS	10776.	225742.	1999.	6043.	0.	0.	8129.	335288.
KENTUCKY	100511.	179683.	40920.	197361.	0.	0.	4378.	625241.
LOUISIANA	12873.	397572.	13058.	0.	0.	0.	1565.	201289.
MAINE	10942.	185496.	3236.	0.	0.	0.	13006.	339947.
MARYLAND	128506.	194164.	4271.	435153.	0.	0.	46717.	1578261.
MASSACHUSETTS	462012.	539799.	93578.	279222.	0.	0.	36490.	1532537.
MICHIGAN	732585.	473233.	12011.	442124.	0.	0.	20643.	1285308.
MINNESOTA	446402.	350590.	24950.	19295.	0.	0.	15622.	219801.
MISSISSIPPI	145039.	36403.	3442.	90497.	0.	0.	9872.	303667.
MISSOURI	5151.	186378.	16969.	18128.	0.	0.	6906.	104645.
MONTANA	10612.	65802.	7298.	58205.	0.	0.	1692.	236275.
NEBRASKA	17969.	133946.	24454.	0.	0.	0.	11668.	46391.
NEVADA	15113.	17348.	1252.	0.	0.	0.	3652.	124251.
NEW HAMPSHIRE	4822.	112223.	3554.	0.	0.	0.	25973.	870148.
NEW JERSEY	26803.	651248.	156118.	0.	0.	0.	1374.	65770.
NEW MEXICO	1603.	37854.	10413.	14526.	0.	0.	255753.	7504336.
NEW YORK	3524259.	1551029.	1328418.	844678.	0.	0.	20939.	429659.
NORTH CAROLINA	159277.	231800.	705.	15338.	0.	0.	1448.	85627.
NORTH DAKOTA	54997.	28385.	297.	0.	0.	0.	131700.	987595.
OHIO	463843.	253676.	5319.	132058.	0.	0.	3731.	522474.
OKLAHOMA	91.	379216.	7.	139429.	0.	0.	17559.	258825.
OREGON	13432.	124629.	882.	102273.	0.	0.	131180.	1458618.
PENNSYLVANIA	521297.	266167.	36957.	398416.	0.	0.	5780.	266911.
RHODE ISLAND	59776.	117261.	891.	83203.	0.	0.	20414.	276318.
SOUTH CAROLINA	145435.	64259.	2814.	43395.	0.	0.	5208.	94400.
SOUTH DAKOTA	9850.	56630.	40.	22572.	0.	0.	40048.	534768.
TENNESSEE	9870.	379507.	13238.	92124.	0.	0.	53880.	1750758.
TEXAS	117008.	1118393.	186495.	276983.	0.	0.	3699.	130527.
UTAH	39013.	69654.	783.	17378.	0.	0.	2475.	104805.
VERMONT	4001.	65144.	9929.	23255.	0.	0.	2496.	545937.
VIRGINIA	30523.	385105.	15464.	111946.	0.	0.	45301.	439050.
WASHINGTON	272875.	75094.	11259.	34510.	0.	0.	2826.	2885.
WEST VIRGINIA	642.	19693.	5483.	0.	0.	0.	35728.	1596806.
WISCONSIN	1174462.	34310.	46720.	305849.	0.	0.	202.	24953.
WYOMING	5853.	14011.	4838.	0.	0.	0.	0.	0.
NATIONAL TOTAL	12753242.	12078559.	2245876.	4971203.	0.	0.	1501043.	33649232.

MEDICARE PROJECTIONS BY STATE
FOR 1977, 1980, 1985, AND 1990

LIC DEMAND
 YEAR: 1977

MEDICARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	156396.	0.	358520.	0.	0.	0.	0.	514976.
ALASKA	2.	0.	2705.	0.	0.	0.	0.	2707.
ARIZONA	75034.	0.	111920.	0.	0.	0.	0.	186924.
ARKANSAS	17531.	0.	53863.	0.	0.	0.	0.	71394.
CALIFORNIA	1144057.	0.	1694264.	0.	0.	0.	0.	2838321.
COLORADO	69154.	0.	168567.	0.	0.	0.	0.	237721.
CONNECTICUT	199000.	0.	594141.	0.	0.	0.	0.	793142.
DELAWARE	15478.	0.	59574.	0.	0.	0.	0.	75052.
DIST OF COLUMBIA	19154.	0.	71419.	0.	0.	0.	0.	90572.
FLORIDA	596230.	0.	1776575.	0.	0.	0.	0.	2372805.
GEORGIA	97932.	0.	259985.	0.	0.	0.	0.	357917.
HAWAII	39612.	0.	41390.	0.	0.	0.	0.	81002.
IDAHO	27204.	0.	101893.	0.	0.	0.	0.	129007.
ILLINOIS	554739.	0.	1255522.	0.	0.	0.	0.	1810260.
INDIANA	227697.	0.	174395.	0.	0.	0.	0.	402002.
IOWA	93466.	0.	145603.	0.	0.	0.	0.	239069.
KANSAS	70037.	0.	115841.	0.	0.	0.	0.	185848.
KENTUCKY	176106.	0.	159097.	0.	0.	0.	0.	335205.
LOUISIANA	60470.	0.	476402.	0.	0.	0.	0.	536872.
MAINE	58326.	0.	193164.	0.	0.	0.	0.	251489.
MARYLAND	134591.	0.	247416.	0.	0.	0.	0.	382007.
MASSACHUSETTS	233617.	0.	1066783.	0.	0.	0.	0.	1300399.
MICHIGAN	619579.	0.	505698.	0.	0.	0.	0.	1126277.
MINNESOTA	145867.	0.	168956.	0.	0.	0.	0.	314833.
MISSISSIPPI	20618.	0.	623435.	0.	0.	0.	0.	644053.
MISSOURI	212446.	0.	840780.	0.	0.	0.	0.	1053225.
MONTANA	39458.	0.	54960.	0.	0.	0.	0.	94418.
NEBRASKA	64669.	0.	85382.	0.	0.	0.	0.	154051.
NEVADA	38112.	0.	28576.	0.	0.	0.	0.	66687.
NEW HAMPSHIRE	65758.	0.	104633.	0.	0.	0.	0.	170391.
NEW JERSEY	393452.	0.	1091520.	0.	0.	0.	0.	1484972.
NEW MEXICO	10282.	0.	71180.	0.	0.	0.	0.	81462.
NEW YORK	1183157.	0.	1892325.	0.	0.	0.	0.	3075482.
NORTH CAROLINA	320264.	0.	399488.	0.	0.	0.	0.	719752.
NORTH DAKOTA	15973.	0.	23863.	0.	0.	0.	0.	39837.
OHIO	690320.	0.	659090.	0.	0.	0.	0.	1359410.
OKLAHOMA	40589.	0.	70907.	0.	0.	0.	0.	111496.
OREGON	137978.	0.	148150.	0.	0.	0.	0.	286128.
PENNSYLVANIA	690579.	0.	1864027.	0.	0.	0.	0.	2554605.
RHODE ISLAND	72653.	0.	141282.	0.	0.	0.	0.	213934.
SOUTH CAROLINA	57152.	0.	154443.	0.	0.	0.	0.	211605.
SOUTH DAKOTA	18238.	0.	34126.	0.	0.	0.	0.	52424.
TENNESSEE	137840.	0.	359820.	0.	0.	0.	0.	497700.
TEXAS	214943.	0.	891481.	0.	0.	0.	0.	1106424.
UTAH	45001.	0.	44711.	0.	0.	0.	0.	89711.
VERMONT	31090.	0.	118974.	0.	0.	0.	0.	150065.
VIRGINIA	102251.	0.	184398.	0.	0.	0.	0.	286649.
WASHINGTON	176409.	0.	272907.	0.	0.	0.	0.	449315.
WEST VIRGINIA	54981.	0.	137431.	0.	0.	0.	0.	192312.
WISCONSIN	129718.	0.	300373.	0.	0.	0.	0.	430092.
WYOMING	7772.	0.	33176.	0.	0.	0.	0.	40948.
NATIONAL TOTAL	9306849.	0.	20445952.	0.	0.	0.	0.	30252576.

LTC SUPPLY
YEAR: 1977

MEDICARE

YEAR	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER
ALABAMA	137092	0	274839	0	0	0
ALASKA	632	0	1513	0	0	0
ARIZONA	77790	0	90127	0	0	0
ARKANSAS	21222	0	40903	0	0	0
CALIFORNIA	1169136	0	1223215	0	0	0
COLORADO	76834	0	140392	0	0	0
CONNECTICUT	205634	0	401829	0	0	0
DELAWARE	14373	0	49772	0	0	0
DIST OF COLUMBIA	19379	0	51961	0	0	0
FLORIDA	594484	0	1314328	0	0	0
GEORGIA	91665	0	152093	0	0	0
HAWAII	39212	0	30952	0	0	0
IDAHO	28477	0	65492	0	0	0
ILLINOIS	537693	0	672222	0	0	0
INDIANA	227106	0	127729	0	0	0
IOWA	89784	0	93245	0	0	0
KANSAS	70687	0	71234	0	0	0
KENTUCKY	171737	0	138769	0	0	0
LOUISIANA	54535	0	404861	0	0	0
MAINE	61727	0	127487	0	0	0
MARYLAND	132393	0	188572	0	0	0
MASSACHUSETTS	234263	0	736666	0	0	0
MICHIGAN	619344	0	322270	0	0	0
MINNESOTA	140340	0	137235	0	0	0
MISSISSIPPI	17044	0	385371	0	0	0
MISSOURI	202986	0	537371	0	0	0
MONTANA	36476	0	33961	0	0	0
NEBRASKA	66862	0	60544	0	0	0
NEVADA	38270	0	23634	0	0	0
NEW HAMPSHIRE	70191	0	90982	0	0	0
NEW JERSEY	399623	0	832333	0	0	0
NEW MEXICO	9420	0	75212	0	0	0
NEW YORK	1190812	0	1310708	0	0	0
NORTH CAROLINA	317062	0	286378	0	0	0
NORTH DAKOTA	15121	0	12662	0	0	0
OHIO	674199	0	551934	0	0	0
OKLAHOMA	39240	0	47981	0	0	0
OREGON	134337	0	134208	0	0	0
PENNSYLVANIA	670772	0	130457	0	0	0
RHODE ISLAND	80176	0	126735	0	0	0
SOUTH CAROLINA	51140	0	153212	0	0	0
SOUTH DAKOTA	17044	0	16553	0	0	0
TENNESSEE	121815	0	297164	0	0	0
TEXAS	203051	0	694407	0	0	0
UTAH	42855	0	38783	0	0	0
VERMONT	34913	0	95700	0	0	0
VIRGINIA	94359	0	132041	0	0	0
WASHINGTON	183557	0	158467	0	0	0
WEST VIRGINIA	49841	0	96131	0	0	0
WISCONSIN	119171	0	255554	0	0	0
WYOMING	7105	0	22204	0	0	0
NATIONAL TOTAL	969581	0	1764	0	0	0

LIC UTILIZATION
YEAR: 1977

MEDICARE

STATE	SNF (DAYS)	ICF (DAYS)	HOME HEALTH (VISITS)	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL
ALABAMA	137092.	0.	274338.	0.	0.	0.	2008.
ALASKA	2.	0.	1513.	0.	0.	0.	0.
ARIZONA	75004.	0.	90127.	0.	0.	0.	0.
ARKANSAS	17531.	0.	40993.	0.	0.	0.	0.
CALIFORNIA	1144056.	0.	1223215.	0.	0.	0.	0.
COLORADO	69154.	0.	140392.	0.	0.	0.	0.
CONNECTICUT	199000.	0.	401829.	0.	0.	0.	0.
DELAWARE	14373.	0.	49792.	0.	0.	0.	64.
DIST OF COLUMBIA	18379.	0.	51961.	0.	0.	0.	52.
FLORIDA	594484.	0.	1314328.	0.	0.	0.	141.
GEORGIA	91655.	0.	152093.	0.	0.	0.	636.
HAWAII	39212.	0.	30952.	0.	0.	0.	21.
IDAHO	27204.	0.	65492.	0.	0.	0.	0.
ILLINOIS	537693.	0.	672222.	0.	0.	0.	1230.
INDIANA	227105.	0.	127729.	0.	0.	0.	44.
IOWA	89784.	0.	96245.	0.	0.	0.	357.
KANSAS	70007.	0.	71234.	0.	0.	0.	0.
KENTUCKY	171737.	0.	138769.	0.	0.	0.	337.
LOUISIANA	54535.	0.	404861.	0.	0.	0.	391.
MAINE	58326.	0.	127487.	0.	0.	0.	0.
MARYLAND	132393.	0.	188572.	0.	0.	0.	160.
MASSACHUSETTS	233517.	0.	736066.	0.	0.	0.	0.
MICHIGAN	619344.	0.	322270.	0.	0.	0.	15.
MINNESOTA	140340.	0.	137235.	0.	0.	0.	461.
MISSISSIPPI	17044.	0.	385371.	0.	0.	0.	288.
MISSOURI	202986.	0.	537371.	0.	0.	0.	718.
MONTANA	36476.	0.	33951.	0.	0.	0.	246.
NEBRASKA	66802.	0.	50544.	0.	0.	0.	155.
NEVADA	38112.	0.	28576.	0.	0.	0.	0.
NEW HAMPSHIRE	65758.	0.	90992.	0.	0.	0.	0.
NEW JERSEY	393452.	0.	832333.	0.	0.	0.	0.
NEW MEXICO	9420.	0.	71180.	0.	0.	0.	49.
NEW YORK	1183157.	0.	1310708.	0.	0.	0.	0.
NORTH CAROLINA	317062.	0.	285378.	0.	0.	0.	166.
NORTH DAKOTA	15121.	0.	12662.	0.	0.	0.	83.
OHIO	674199.	0.	551934.	0.	0.	0.	1054.
OKLAHOMA	39240.	0.	49931.	0.	0.	0.	133.
OREGON	134307.	0.	134208.	0.	0.	0.	325.
PENNSYLVANIA	670772.	0.	1308457.	0.	0.	0.	1364.
RHODE ISLAND	72653.	0.	126735.	0.	0.	0.	0.
SOUTH CAROLINA	51140.	0.	153212.	0.	0.	0.	570.
SOUTH DAKOTA	17044.	0.	18653.	0.	0.	0.	112.
TENNESSEE	121815.	0.	297164.	0.	0.	0.	1014.
TEXAS	203051.	0.	694407.	0.	0.	0.	924.
UTAH	42855.	0.	38703.	0.	0.	0.	196.
VERMONT	31090.	0.	96700.	0.	0.	0.	0.
VIRGINIA	94359.	0.	132041.	0.	0.	0.	524.
WASHINGTON	175409.	0.	168469.	0.	0.	0.	0.
WEST VIRGINIA	49841.	0.	96101.	0.	0.	0.	314.
WISCONSIN	119171.	0.	255534.	0.	0.	0.	802.
WYOMING	7105.	0.	22294.	0.	0.	0.	41.
NATIONAL TOTAL	9612511.	0.	14657442.	0.	0.	0.	15000.

LTC RECIPIENTS
YEAR: 1977

MEDICARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	5596.	0.	13344.	0.	0.	0.	251.	19191.
ALASKA	2.	0.	178.	0.	0.	0.	0.	180.
ARIZONA	2830.	0.	4529.	0.	0.	0.	0.	7359.
ARKANSAS	752.	0.	2541.	0.	0.	0.	0.	3293.
CALIFORNIA	41669.	0.	66479.	0.	0.	0.	0.	114148.
COLORADO	3129.	0.	7756.	0.	0.	0.	0.	10886.
CONNECTICUT	8468.	0.	18019.	0.	0.	0.	0.	26487.
DELAWARE	330.	0.	1915.	0.	0.	0.	8.	2253.
DIST OF COLUMBIA	448.	0.	2735.	0.	0.	0.	7.	3229.
FLORIDA	18520.	0.	59472.	0.	0.	0.	13.	78009.
GEORGIA	3631.	0.	3791.	0.	0.	0.	80.	12552.
HAWAII	852.	0.	1887.	0.	0.	0.	3.	2742.
IDAHO	1248.	0.	2729.	0.	0.	0.	0.	3977.
ILLINOIS	15189.	0.	27438.	0.	0.	0.	154.	42780.
INDIANA	6660.	0.	6942.	0.	0.	0.	6.	13607.
IOWA	3375.	0.	5614.	0.	0.	0.	45.	9034.
KANSAS	2318.	0.	2968.	0.	0.	0.	0.	5286.
KENTUCKY	5173.	0.	8728.	0.	0.	0.	42.	13942.
LOUISIANA	1428.	0.	13406.	0.	0.	0.	49.	14883.
MAINE	2032.	0.	6471.	0.	0.	0.	0.	8504.
MARYLAND	3815.	0.	9977.	0.	0.	0.	20.	13813.
MASSACHUSETTS	6400.	0.	34105.	0.	0.	0.	0.	40505.
MICHIGAN	15255.	0.	19532.	0.	0.	0.	2.	34788.
MINNESOTA	4571.	0.	7753.	0.	0.	0.	58.	12382.
MISSISSIPPI	538.	0.	11713.	0.	0.	0.	36.	12287.
MISSOURI	5988.	0.	22390.	0.	0.	0.	90.	28468.
MONTANA	1130.	0.	1530.	0.	0.	0.	31.	2741.
NEBRASKA	2229.	0.	3604.	0.	0.	0.	19.	5852.
NEVADA	1069.	0.	1148.	0.	0.	0.	0.	2237.
NEW HAMPSHIRE	1912.	0.	4136.	0.	0.	0.	0.	6047.
NEW JERSEY	10327.	0.	32513.	0.	0.	0.	0.	42840.
NEW MEXICO	212.	0.	3911.	0.	0.	0.	6.	4129.
NEW YORK	25335.	0.	64250.	0.	0.	0.	0.	89546.
NORTH CAROLINA	6484.	0.	13382.	0.	0.	0.	21.	19887.
NORTH DAKOTA	573.	0.	659.	0.	0.	0.	10.	1243.
OHIO	17243.	0.	29674.	0.	0.	0.	132.	47048.
OKLAHOMA	1509.	0.	3730.	0.	0.	0.	17.	5256.
OREGON	4647.	0.	8441.	0.	0.	0.	41.	13129.
PENNSYLVANIA	16080.	0.	71893.	0.	0.	0.	171.	90144.
RHODE ISLAND	2691.	0.	5543.	0.	0.	0.	0.	9274.
SOUTH CAROLINA	1923.	0.	10014.	0.	0.	0.	71.	12008.
SOUTH DAKOTA	618.	0.	844.	0.	0.	0.	14.	1476.
TENNESSEE	3023.	0.	14151.	0.	0.	0.	127.	17300.
TEXAS	6210.	0.	30456.	0.	0.	0.	116.	36781.
UTAH	1558.	0.	1558.	0.	0.	0.	24.	3140.
VERMONT	891.	0.	4671.	0.	0.	0.	0.	5562.
VIRGINIA	2483.	0.	7061.	0.	0.	0.	66.	9610.
WASHINGTON	7604.	0.	10869.	0.	0.	0.	0.	18473.
WEST VIRGINIA	1210.	0.	5491.	0.	0.	0.	39.	6740.
WISCONSIN	3536.	0.	13390.	0.	0.	0.	100.	17527.
WYOMING	173.	0.	738.	0.	0.	0.	5.	916.

MEDICARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	3233.	0.	6575.	0.	0.	0.	99.	9907.
ALASKA	0.	0.	46.	0.	0.	0.	0.	46.
ARIZONA	2499.	0.	1987.	0.	0.	0.	0.	4486.
ARKANSAS	536.	0.	1063.	0.	0.	0.	0.	1649.
CALIFORNIA	41632.	0.	32855.	0.	0.	0.	0.	74488.
COLORADO	2241.	0.	3385.	0.	0.	0.	0.	5625.
CONNECTICUT	5252.	0.	7269.	0.	0.	0.	0.	12521.
DELAWARE	309.	0.	772.	0.	0.	0.	4.	1086.
DIST OF COLUMBIA	491.	0.	1327.	0.	0.	0.	4.	1822.
FLORIDA	15742.	0.	35079.	0.	0.	0.	8.	50829.
GEORGIA	2737.	0.	4091.	0.	0.	0.	29.	6847.
HAWAII	1476.	0.	757.	0.	0.	0.	2.	2235.
IDAHO	544.	0.	1211.	0.	0.	0.	0.	1755.
ILLINOIS	15345.	0.	14130.	0.	0.	0.	87.	33563.
INDIANA	5798.	0.	2436.	0.	0.	0.	2.	8236.
IOWA	3379.	0.	1193.	0.	0.	0.	19.	4592.
KANSAS	2420.	0.	1205.	0.	0.	0.	0.	3625.
KENTUCKY	4297.	0.	3325.	0.	0.	0.	17.	7639.
LOUISIANA	1593.	0.	8567.	0.	0.	0.	18.	10178.
MAINE	2814.	0.	2322.	0.	0.	0.	0.	5135.
MARYLAND	3775.	0.	4447.	0.	0.	0.	11.	8232.
MASSACHUSETTS	11580.	0.	11985.	0.	0.	0.	0.	23566.
MICHIGAN	17044.	0.	9117.	0.	0.	0.	1.	26162.
MINNESOTA	5699.	0.	2693.	0.	0.	0.	26.	8417.
MISSISSIPPI	762.	0.	6756.	0.	0.	0.	11.	7529.
MISSOURI	7653.	0.	10409.	0.	0.	0.	37.	18109.
MONTANA	771.	0.	451.	0.	0.	0.	14.	1246.
NEBRASKA	2261.	0.	1222.	0.	0.	0.	8.	3492.
NEVADA	1151.	0.	497.	0.	0.	0.	0.	1648.
NEW HAMPSHIRE	2344.	0.	1125.	0.	0.	0.	0.	3470.
NEW JERSEY	13535.	0.	18436.	0.	0.	0.	0.	31971.
NEW MEXICO	378.	0.	1210.	0.	0.	0.	3.	1591.
NEW YORK	46498.	0.	28849.	0.	0.	0.	0.	75347.
NORTH CAROLINA	7172.	0.	3517.	0.	0.	0.	7.	10696.
NORTH DAKOTA	392.	0.	126.	0.	0.	0.	3.	521.
OHIO	19783.	0.	9030.	0.	0.	0.	70.	29083.
OKLAHOMA	2198.	0.	1217.	0.	0.	0.	6.	3421.
OREGON	4123.	0.	3883.	0.	0.	0.	23.	8029.
PENNSYLVANIA	19177.	0.	26754.	0.	0.	0.	92.	46028.
RHODE ISLAND	2350.	0.	2213.	0.	0.	0.	0.	4593.
SOUTH CAROLINA	1047.	0.	4032.	0.	0.	0.	25.	5074.
SOUTH DAKOTA	375.	0.	132.	0.	0.	0.	5.	513.
TENNESSEE	3674.	0.	6398.	0.	0.	0.	48.	10120.
TEXAS	7679.	0.	17353.	0.	0.	0.	44.	25077.
UTAH	1322.	0.	597.	0.	0.	0.	11.	1930.
VERMONT	863.	0.	1474.	0.	0.	0.	0.	2336.
VIRGINIA	3020.	0.	2935.	0.	0.	0.	27.	5983.
WASHINGTON	4902.	0.	4247.	0.	0.	0.	0.	9149.
WEST VIRGINIA	1401.	0.	1203.	0.	0.	0.	17.	3321.
WISCONSIN	3110.	0.	4892.	0.	0.	0.	46.	8038.
WYOMING	178.	0.	365.	0.	0.	0.	2.	545.
NATIONAL TOTAL	308845.	0.	321818.	0.	0.	0.	829.	631492.

MEDICARE

LTC DEMAND
YEAR: 1980

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	172332	0	374954	0	0	0	0	547347
ALASKA	2	0	3020	0	0	0	0	3022
ARIZONA	90927	0	125520	0	0	0	0	216447
ARKANSAS	18529	0	55380	0	0	0	0	74909
CALIFORNIA	126019	0	1704662	0	0	0	0	3054860
COLORADO	76100	0	184145	0	0	0	0	260285
CONNECTICUT	215418	0	613342	0	0	0	0	823760
DELAWARE	16799	0	62239	0	0	0	0	79038
DIST OF COLUMBIA	19466	0	70027	0	0	0	0	89493
FLORIDA	715389	0	1967502	0	0	0	0	2682690
GEORGIA	108746	0	273617	0	0	0	0	382363
HAWAII	46116	0	44728	0	0	0	0	90844
IDAH0	29761	0	110243	0	0	0	0	140004
ILLINOIS	591995	0	1284139	0	0	0	0	1875134
INDIANA	240970	0	180434	0	0	0	0	421304
IOWA	96338	0	149153	0	0	0	0	245491
KANSAS	73407	0	119757	0	0	0	0	193224
KENTUCKY	191361	0	166601	0	0	0	0	358022
LOUISIANA	69485	0	501990	0	0	0	0	571475
MAINE	62288	0	201216	0	0	0	0	263504
MARYLAND	145341	0	256406	0	0	0	0	402147
MASSACHUSETTS	244185	0	1049214	0	0	0	0	1333398
MICHIGAN	644963	0	522983	0	0	0	0	1167946
MINNESOTA	153161	0	176226	0	0	0	0	329387
MISSISSIPPI	21806	0	651568	0	0	0	0	673374
MISSOURI	223503	0	863865	0	0	0	0	1087367
MONTANA	42283	0	57772	0	0	0	0	100055
NEBRASKA	71162	0	89069	0	0	0	0	159231
NEVADA	47265	0	32648	0	0	0	0	79913
NEW HAMPSHIRE	72226	0	111975	0	0	0	0	184200
NEW JERSEY	428617	0	1124735	0	0	0	0	1553403
NEW MEXICO	11607	0	77185	0	0	0	0	88852
NEW YORK	1226090	0	1900925	0	0	0	0	3127015
NORTH CAROLINA	363851	0	421128	0	0	0	0	785040
NORTH DAKOTA	16955	0	24748	0	0	0	0	41703
OHIO	730949	0	685230	0	0	0	0	1417178
OKLAHOMA	43405	0	74649	0	0	0	0	118055
OREGON	151620	0	159668	0	0	0	0	311288
PENNSYLVANIA	721182	0	1894633	0	0	0	0	2615814
RHODE ISLAND	76603	0	143947	0	0	0	0	220510
SOUTH CAROLINA	63490	0	163906	0	0	0	0	227396
SOUTH DAKOTA	13813	0	35193	0	0	0	0	54006
TENNESSEE	159567	0	330260	0	0	0	0	539828
TEXAS	236158	0	756734	0	0	0	0	1192891
UTAH	50494	0	49042	0	0	0	0	99536
VERMONT	32761	0	124671	0	0	0	0	157431
VIRGINIA	112322	0	194793	0	0	0	0	307115
WASHINGTON	193731	0	290433	0	0	0	0	484169
WEST VIRGINIA	59428	0	143302	0	0	0	0	202729
WISCONSIN	137922	0	312605	0	0	0	0	450529
WYOMING	8520	0	36828	0	0	0	0	45348

MEDICARE

LTC SUPPLY
YEAR: 1980

YEAR	SNF	ICF	HOME HEALTH	ICF/HR	PERSONAL CARE	HOMEMAKER
ALABAMA	156335	0	358854	0	0	0
ALASKA	436	0	2730	0	0	0
ARIZONA	71645	0	98009	0	0	0
ARKANSAS	15158	0	54159	0	0	0
CALIFORNIA	103356	0	1701622	0	0	0
COLORADO	62409	0	176553	0	0	0
CONNECTICUT	131811	0	572511	0	0	0
DELAWARE	14174	0	60525	0	0	0
DIST OF COLUMBIA	18473	0	65925	0	0	0
FLORIDA	599310	0	1832023	0	0	0
GEORGIA	100327	0	249302	0	0	0
HAWAII	41254	0	42889	0	0	0
IDAH0	23543	0	102727	0	0	0
ILLINOIS	587932	0	1146546	0	0	0
INDIANA	218406	0	159770	0	0	0
IOWA	91067	0	139565	0	0	0
KANSAS	61190	0	109762	0	0	0
KENTUCKY	188699	0	162895	0	0	0
LOUISIANA	64690	0	490214	0	0	0
MAINE	44846	0	187210	0	0	0
MARYLAND	125398	0	245174	0	0	0
MASSACHUSETTS	158397	0	1019554	0	0	0
MICHIGAN	523515	0	505168	0	0	0
MINNESOTA	133479	0	169978	0	0	0
MISSISSIPPI	16908	0	600554	0	0	0
MISSOURI	217230	0	796908	0	0	0
MONTANA	45210	0	48176	0	0	0
NEBRASKA	70204	0	82636	0	0	0
NEVADA	32598	0	32937	0	0	0
NEW HAMPSHIRE	50915	0	109970	0	0	0
NEW JERSEY	370496	0	1975500	0	0	0
NEW MEXICO	8466	0	73325	0	0	0
NEW YORK	779963	0	1783091	0	0	0
NORTH CAROLINA	300711	0	390854	0	0	0
NORTH DAKOTA	23690	0	22256	0	0	0
OHIO	689242	0	662859	0	0	0
OKLAHOMA	41686	0	70354	0	0	0
OREGON	135162	0	158018	0	0	0
PENNSYLVANIA	704739	0	1779082	0	0	0
RHODE ISLAND	48783	0	141125	0	0	0
SOUTH CAROLINA	101127	0	164035	0	0	0
SOUTH DAKOTA	17490	0	31423	0	0	0
TENNESSEE	152114	0	369204	0	0	0
TEXAS	188959	0	914805	0	0	0
UTAH	52544	0	48597	0	0	0
VERMONT	23099	0	120638	0	0	0
VIRGINIA	114911	0	183160	0	0	0
WASHINGTON	158023	0	263392	0	0	0
WEST VIRGINIA	52724	0	135126	0	0	0
WISCONSIN	131741	0	304240	0	0	0
WYOMING	5813	0	34698	0	0	0
NATIONAL TOTAL	9002193	0	20132880	0	0	0

LIC UTILIZATION
YEAR: 1980

MLDLCALF

STATE	SNF (DAYS)	ICF (DAYS)	HOME HEALTH (VISITS)	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL
ALABAMA	156335	0	358954	0	0	0	1673
ALASKA	2	0	2730	0	0	0	0
ARIZONA	71645	0	98009	0	0	0	1867
ARKANSAS	15158	0	54159	0	0	0	373
CALIFORNIA	103355	0	1701622	0	0	0	24043
COLORADO	62439	0	174553	0	0	0	1572
CONNECTICUT	131811	0	572511	0	0	0	8529
DELAWARE	14174	0	60525	0	0	0	153
DIST OF COLUMBIA	18473	0	65925	0	0	0	67
FLORIDA	599310	0	1832022	0	0	0	9393
GEORGIA	100327	0	249302	0	0	0	857
HAWAII	41254	0	42389	0	0	0	262
IDAHO	23543	0	102727	0	0	0	724
ILLINOIS	587932	0	1146545	0	0	0	293
INDIANA	218406	0	169770	0	0	0	1684
IOWA	91087	0	139555	0	0	0	509
KANSAS	61190	0	109762	0	0	0	1045
KENTUCKY	188690	0	162895	0	0	0	205
LOUISIANA	64690	0	490214	0	0	0	318
MAINE	44846	0	187210	0	0	0	1563
MARYLAND	125398	0	245174	0	0	0	1457
MASSACHUSETTS	158397	0	1019554	0	0	0	6037
MICHIGAN	523515	0	505158	0	0	0	7617
MINNESOTA	133479	0	169978	0	0	0	1644
MISSISSIPPI	13968	0	500554	0	0	0	230
MISSOURI	217230	0	798908	0	0	0	476
MONTANA	42283	0	48176	0	0	0	0
NEBRASKA	70204	0	82636	0	0	0	82
NEVADA	32596	0	32648	0	0	0	1050
NEW HAMPSHIRE	50916	0	10970	0	0	0	1585
NEW JERSEY	370496	0	1075579	0	0	0	3901
NEW MEXICO	8466	0	77185	0	0	0	182
NEW YORK	779903	0	1783090	0	0	0	24438
NORTH CAROLINA	300711	0	398854	0	0	0	3278
NORTH DAKOTA	16955	0	22256	0	0	0	0
OHIO	689242	0	667369	0	0	0	2728
OKLAHOMA	41686	0	70354	0	0	0	170
OREGON	135162	0	158018	0	0	0	1457
PENNSYLVANIA	704239	0	1779051	0	0	0	1172
RHODE ISLAND	43783	0	141125	0	0	0	2654
SOUTH CAROLINA	63430	0	163906	0	0	0	0
SOUTH DAKOTA	17490	0	31423	0	0	0	124
TENNESSEE	152114	0	369204	0	0	0	472
TEXAS	188959	0	914835	0	0	0	3674
UTAH	50494	0	42597	0	0	0	0
VERMONT	23990	0	120638	0	0	0	709
VIRGINIA	112327	0	183150	0	0	0	0
WASHINGTON	158023	0	268392	0	0	0	3929
WEST VIRGINIA	5274	0	135126	0	0	0	418
WISCONSIN	131741	0	304240	0	0	0	470
WYOMING	5818	0	34698	0	0	0	167

LIC RECIPIENTS
YEAR: 1980

MEDICARE

STATE	SNF	ICF	HJMC HEALTH	ICF/MR	PERSONAL CARE	HOME MAKER	HOSPITAL	TOTAL
ALABAMA	6381.	0.	17425.	0.	0.	0.	209.	24015.
ALASKA	2.	0.	321.	0.	0.	0.	0.	324.
ARIZONA	2704.	0.	4925.	0.	0.	0.	233.	7862.
ARKANSAS	651.	0.	3364.	0.	0.	0.	47.	4061.
CALIFORNIA	43065.	0.	92419.	0.	0.	0.	3005.	138550.
COLORADO	2324.	0.	9644.	0.	0.	0.	196.	12664.
CONNECTICUT	5609.	0.	25673.	0.	0.	0.	1066.	32348.
DELAWARE	325.	0.	2324.	0.	0.	0.	19.	2672.
DIST OF COLUMBIA	490.	0.	3479.	0.	0.	0.	8.	3968.
FLORIDA	18670.	0.	85159.	0.	0.	0.	1174.	105004.
GEORGIA	4029.	0.	14411.	0.	0.	0.	107.	18547.
HAWAII	897.	0.	2615.	0.	0.	0.	33.	3545.
IDAH0	1080.	0.	4260.	0.	0.	0.	90.	5451.
ILLINOIS	15608.	0.	46793.	0.	0.	0.	37.	63443.
INDIANA	6435.	0.	9227.	0.	0.	0.	210.	15842.
IOWA	3424.	0.	7975.	0.	0.	0.	64.	11463.
KANSAS	2025.	0.	4573.	0.	0.	0.	131.	6730.
KENTUCKY	5634.	0.	10245.	0.	0.	0.	26.	15954.
LOUISIANA	1693.	0.	16232.	0.	0.	0.	40.	17965.
MAINE	1563.	0.	9503.	0.	0.	0.	195.	11261.
MARYLAND	3614.	0.	12972.	0.	0.	0.	182.	16768.
MASSACHUSETTS	4340.	0.	47202.	0.	0.	0.	755.	52296.
MICHIGAN	12894.	0.	30616.	0.	0.	0.	952.	44463.
MINNESOTA	4348.	0.	9603.	0.	0.	0.	205.	14157.
MISSISSIPPI	598.	0.	18254.	0.	0.	0.	29.	18881.
MISSOURI	6408.	0.	33290.	0.	0.	0.	60.	39758.
MONTANA	1368.	0.	2170.	0.	0.	0.	0.	3538.
NEBRASKA	2340.	0.	4919.	0.	0.	0.	10.	7269.
NEVADA	931.	0.	1311.	0.	0.	0.	131.	2374.
NEW HAMPSHIRE	1430.	0.	4999.	0.	0.	0.	198.	6677.
NEW JERSEY	9724.	0.	42016.	0.	0.	0.	488.	52228.
NEW MEXICO	190.	0.	4241.	0.	0.	0.	23.	4454.
NEW YORK	16732.	0.	87406.	0.	0.	0.	3055.	107163.
NORTH CAROLINA	6150.	0.	18638.	0.	0.	0.	410.	25197.
NORTH DAKOTA	642.	0.	1159.	0.	0.	0.	0.	1801.
OHIO	17628.	0.	35638.	0.	0.	0.	341.	53607.
PENNSYLVANIA	18932.	0.	97751.	0.	0.	0.	147.	116879.
RHODE ISLAND	1807.	0.	6217.	0.	0.	0.	332.	8355.
SOUTH CAROLINA	2387.	0.	10713.	0.	0.	0.	0.	13100.
SOUTH DAKOTA	634.	0.	1422.	0.	0.	0.	15.	2071.
TENNESSEE	3775.	0.	17531.	0.	0.	0.	59.	21415.
TEXAS	5779.	0.	40298.	0.	0.	0.	459.	46536.
UTAH	1836.	0.	1952.	0.	0.	0.	0.	3788.
VERMONT	662.	0.	5828.	0.	0.	0.	89.	6578.
VIRGINIA	2956.	0.	9795.	0.	0.	0.	0.	12750.
WASHINGTON	6811.	0.	17316.	0.	0.	0.	491.	24618.
WEST VIRGINIA	1280.	0.	7721.	0.	0.	0.	52.	9053.
WISCONSIN	3909.	0.	16535.	0.	0.	0.	59.	20503.
WYOMING	142.	0.	1153.	0.	0.	0.	21.	1315.
NATIONAL TOTAL	27025.	0.	974550.	0.	0.	0.	15656.	1260909.

LTC EXPENDITURES (\$1000)
YEAR: 1980

MEDICARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	5034	0	11808	0	0	0	100	16400
ARIZONA	3310	0	2827	0	0	0	142	6279
ARKANSAS	702	0	1841	0	0	0	22	2565
CALIFORNIA	52205	0	59778	0	0	0	2555	114538
COLORADO	2803	0	5505	0	0	0	125	8434
CONNECTICUT	4812	0	13540	0	0	0	809	19161
DELAWARE	421	0	1227	0	0	0	14	1662
DIST OF COLUMBIA	683	0	2201	0	0	0	8	2891
FLORIDA	21959	0	65701	0	0	0	693	88359
GEORGIA	4150	0	8748	0	0	0	51	12949
HAWAII	2156	0	1372	0	0	0	24	3552
IDAHO	649	0	2465	0	0	0	51	3185
ILLINOIS	23235	0	40350	0	0	0	24	63713
INDIANA	7710	0	4234	0	0	0	121	12065
IOWA	4760	0	2216	0	0	0	37	7013
KANSAS	2935	0	2427	0	0	0	71	5432
LOUISIANA	2617	0	13569	0	0	0	19	16205
MAINE	3009	0	4459	0	0	0	129	7597
MARYLAND	4949	0	7559	0	0	0	129	12637
MASSACHUSETTS	10923	0	21676	0	0	0	611	33230
MICHIGAN	19941	0	18696	0	0	0	756	39393
MINNESOTA	7530	0	4362	0	0	0	121	12012
MISSISSIPPI	1179	0	13771	0	0	0	12	14961
MISSOURI	11335	0	20246	0	0	0	33	31664
MONTANA	1233	0	355	0	0	0	0	2087
NEBRASKA	3293	0	2132	0	0	0	6	5481
NEVADA	1364	0	743	0	0	0	92	2199
NEW HAMPSHIRE	2518	0	1779	0	0	0	137	4434
NEW JERSEY	17680	0	31160	0	0	0	380	49220
NEW MEXICO	472	0	1716	0	0	0	13	2201
NEW YORK	42562	0	51317	0	0	0	2660	96540
NORTH CAROLINA	9391	0	6410	0	0	0	186	15986
NORTH DAKOTA	608	0	239	0	0	0	0	897
OHIO	26300	0	14185	0	0	0	240	42726
OKLAHOMA	3252	0	2239	0	0	0	11	5500
OREGON	5750	0	5979	0	0	0	135	11864
PENNSYLVANIA	27874	0	47590	0	0	0	105	75568
RHODE ISLAND	2216	0	3222	0	0	0	270	5707
SOUTH CAROLINA	1797	0	5601	0	0	0	0	7393
SOUTH DAKOTA	531	0	292	0	0	0	8	830
TENNESSEE	6355	0	10393	0	0	0	30	16778
TEXAS	9920	0	30026	0	0	0	232	40179
UTAH	2154	0	979	0	0	0	0	3137
VERMONT	887	0	2404	0	0	0	57	3348
VIRGINIA	4935	0	5324	0	0	0	0	10309
WASHINGTON	6078	0	8849	0	0	0	349	15275
WEST VIRGINIA	2051	0	3500	0	0	0	29	5581
WISCONSIN	4756	0	7600	0	0	0	36	12391
WYOMING	201	0	746	0	0	0	11	958
NON-RESIDENT TOTAL	580728	0	580728	0	0	0	11673	884265

LTC DEMAND
YEAR: 1985

MEDICARE

STATE	SELF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	199881.	0.	405064.	0.	0.	0.	0.	604944.
ALASKA	3.	0.	3642.	0.	0.	0.	0.	3645.
ARIZONA	122561.	0.	152611.	0.	0.	0.	0.	275172.
ARKANSAS	20688.	0.	60970.	0.	0.	0.	0.	81657.
CALIFORNIA	1465343.	0.	1476246.	0.	0.	0.	0.	3443589.
COLORADO	88251.	0.	213313.	0.	0.	0.	0.	302073.
CONNECTICUT	228226.	0.	647793.	0.	0.	0.	0.	876018.
DELAWARE	19108.	0.	67038.	0.	0.	0.	0.	86191.
DIST OF COLUMBIA	19924.	0.	67857.	0.	0.	0.	0.	87781.
FLORIDA	963513.	0.	2345255.	0.	0.	0.	0.	3309768.
GEORGIA	128528.	0.	248639.	0.	0.	0.	0.	427168.
HAWAII	59752.	0.	51113.	0.	0.	0.	0.	110875.
IDAH0	34060.	0.	126167.	0.	0.	0.	0.	160227.
ILLINOIS	651421.	0.	1335222.	0.	0.	0.	0.	1986642.
INDIANA	262329.	0.	191309.	0.	0.	0.	0.	453718.
IOWA	100451.	0.	155514.	0.	0.	0.	0.	255265.
KANSAS	79224.	0.	126793.	0.	0.	0.	0.	206017.
KENTUCKY	217422.	0.	180390.	0.	0.	0.	0.	397811.
LOUISIANA	90536.	0.	550816.	0.	0.	0.	0.	641352.
MAINE	68643.	0.	215546.	0.	0.	0.	0.	284329.
MARYLAND	164041.	0.	273851.	0.	0.	0.	0.	437892.
MASSACHUSETTS	260510.	0.	1129409.	0.	0.	0.	0.	1389919.
MICHIGAN	683492.	0.	552345.	0.	0.	0.	0.	1235836.
MINNESOTA	154640.	0.	189476.	0.	0.	0.	0.	354086.
MISSISSIPPI	24470.	0.	703013.	0.	0.	0.	0.	727484.
MISSOURI	240861.	0.	905224.	0.	0.	0.	0.	1146389.
MONTANA	46331.	0.	62903.	0.	0.	0.	0.	109234.
NEBRASKA	74824.	0.	92889.	0.	0.	0.	0.	167713.
NEVADA	66609.	0.	40900.	0.	0.	0.	0.	107509.
NEW HAMPSHIRE	82146.	0.	125591.	0.	0.	0.	0.	207737.
NEW JERSEY	493212.	0.	1184734.	0.	0.	0.	0.	1678000.
NEW MEXICO	14736.	0.	88654.	0.	0.	0.	0.	103390.
NEW YORK	1292939.	0.	1917508.	0.	0.	0.	0.	3210507.
NORTH CAROLINA	447613.	0.	461538.	0.	0.	0.	0.	909201.
NORTH DAKOTA	18674.	0.	26370.	0.	0.	0.	0.	45044.
OHIO	792882.	0.	716856.	0.	0.	0.	0.	1509738.
OKLAHOMA	48589.	0.	81460.	0.	0.	0.	0.	130049.
OREGON	173848.	0.	181206.	0.	0.	0.	0.	355654.
PENNSYLVANIA	779950.	0.	1949913.	0.	0.	0.	0.	2729863.
RHODE ISLAND	83312.	0.	143730.	0.	0.	0.	0.	232042.
SOUTH CAROLINA	74710.	0.	141417.	0.	0.	0.	0.	256125.
SOUTH DAKOTA	19636.	0.	37009.	0.	0.	0.	0.	56645.
TENNESSEE	207510.	0.	418980.	0.	0.	0.	0.	626490.
TEXAS	275991.	0.	1077877.	0.	0.	0.	0.	1353867.
UTAH	60299.	0.	57302.	0.	0.	0.	0.	117601.
VERMONT	35374.	0.	135045.	0.	0.	0.	0.	170429.
VIRGINIA	130950.	0.	213825.	0.	0.	0.	0.	344785.
WASHINGTON	222958.	0.	322753.	0.	0.	0.	0.	545610.
WEST VIRGINIA	57624.	0.	153938.	0.	0.	0.	0.	221562.
WISCONSIN	151718.	0.	334814.	0.	0.	0.	0.	486532.
WYOMING	9936.	0.	43916.	0.	0.	0.	0.	53851.
NATIONAL TOTAL	12030173.	0.	27984512.	0.	0.	0.	0.	35014416.

LTC SUPPLY
YEAR: 1985

MEDICARE

YEAR	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER
ALABAMA	156335	0	453290	0	0	0
ALASKA	436	0	4575	0	0	0
ARIZONA	71645	0	105465	0	0	0
ARKANSAS	15158	0	69229	0	0	0
CALIFORNIA	1033565	0	2271052	0	0	0
COLORADO	62409	0	211173	0	0	0
CONNECTICUT	131811	0	790236	0	0	0
DELAWARE	14174	0	71792	0	0	0
DIST OF COLUMBIA	16473	0	91179	0	0	0
FLORIDA	599310	0	2576162	0	0	0
GEORGIA	100327	0	34053	0	0	0
HAWAII	41254	0	57046	0	0	0
IDAH0	23543	0	152280	0	0	0
ILLINOIS	587932	0	1828784	0	0	0
INDIANA	218405	0	217730	0	0	0
IOWA	91087	0	189715	0	0	0
KANSAS	61190	0	160192	0	0	0
KENTUCKY	188699	0	187406	0	0	0
LOUISIANA	64690	0	579476	0	0	0
MAINE	44846	0	261967	0	0	0
MARYLAND	125398	0	308433	0	0	0
MASSACHUSETTS	158397	0	1354667	0	0	0
MICHIGAN	523515	0	748422	0	0	0
MINNESOTA	133479	0	204955	0	0	0
MISSISSIPPI	18968	0	885194	0	0	0
MISSOURI	217230	0	1130214	0	0	0
MONTANA	45210	0	65406	0	0	0
NEBRASKA	70204	0	106469	0	0	0
NEVADA	32598	0	37107	0	0	0
NEW HAMPSHIRE	50916	0	129795	0	0	0
NEW JERSEY	370496	0	1345943	0	0	0
NEW MEXICO	8436	0	81152	0	0	0
NEW YORK	779963	0	2333705	0	0	0
NORTH CAROLINA	300711	0	532877	0	0	0
NORTH DAKOTA	23690	0	36445	0	0	0
OHIO	689242	0	778007	0	0	0
OKLAHOMA	41696	0	94871	0	0	0
OREGON	135162	0	182276	0	0	0
PENNSYLVANIA	704239	0	2327408	0	0	0
RHODE ISLAND	48783	0	155041	0	0	0
SOUTH CAROLINA	101127	0	174225	0	0	0
SOUTH DAKOTA	17490	0	49580	0	0	0
TENNESSEE	152114	0	445379	0	0	0
TEXAS	188959	0	1173726	0	0	0
UTAH	52544	0	59194	0	0	0
VERMONT	23059	0	146381	0	0	0
VIRGINIA	114911	0	243942	0	0	0
WASHINGTON	158023	0	403301	0	0	0
WEST VIRGINIA	52724	9	182040	0	0	0
WISCONSIN	131741	0	354322	0	0	0
WYOMING	5818	0	51267	0	0	0

MEDICARE

STATE	SNF (DAYS)	ICF (DAYS)	HOME HEALTH (VISITS)	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL
ALABAMA	15635.	0.	405064.	0.	0.	0.	4553.
ALASKA	3.	0.	3642.	0.	0.	0.	0.
ARIZONA	71545.	0.	105465.	0.	0.	0.	4956.
ARKANSAS	15158.	0.	60970.	0.	0.	0.	613.
CALIFORNIA	1033565.	0.	1973245.	0.	0.	0.	45953.
COLORADO	62409.	0.	211173.	0.	0.	0.	2971.
CONNECTICUT	131811.	0.	647793.	0.	0.	0.	10490.
DELAWARE	14174.	0.	67038.	0.	0.	0.	289.
DIST OF COLUMBIA	18473.	0.	67457.	0.	0.	0.	99.
FLORIDA	599310.	0.	2346254.	0.	0.	0.	29587.
GEORGIA	100327.	0.	296639.	0.	0.	0.	2886.
HAWAII	41254.	0.	51113.	0.	0.	0.	1009.
IDAHO	23543.	0.	126167.	0.	0.	0.	1226.
ILLINOIS	587932.	0.	1335221.	0.	0.	0.	4595.
INDIANA	218406.	0.	191339.	0.	0.	0.	3299.
IOWA	91087.	0.	155514.	0.	0.	0.	909.
KANSAS	61190.	0.	126793.	0.	0.	0.	1537.
KENTUCKY	188699.	0.	160390.	0.	0.	0.	2219.
LOUISIANA	64590.	0.	550816.	0.	0.	0.	1724.
MAINE	44846.	0.	215685.	0.	0.	0.	2135.
MARYLAND	125398.	0.	273851.	0.	0.	0.	2834.
MASSACHUSETTS	158397.	0.	1129408.	0.	0.	0.	7198.
MICHIGAN	523515.	0.	552345.	0.	0.	0.	10045.
MINNESOTA	133479.	0.	189446.	0.	0.	0.	2605.
MISSISSIPPI	18958.	0.	703013.	0.	0.	0.	446.
MISSOURI	217230.	0.	905228.	0.	0.	0.	1797.
MONTANA	45210.	0.	62903.	0.	0.	0.	92.
NEBRASKA	70204.	0.	92889.	0.	0.	0.	397.
NEVADA	32598.	0.	37107.	0.	0.	0.	2457.
NEW HAMPSHIRE	50915.	0.	125591.	0.	0.	0.	2325.
NEW JERSEY	370496.	0.	1184787.	0.	0.	0.	8265.
NEW MEXICO	8466.	0.	81152.	0.	0.	0.	359.
NEW YORK	779953.	0.	1917557.	0.	0.	0.	28170.
NORTH CAROLINA	300711.	0.	461588.	0.	0.	0.	7674.
NORTH DAKOTA	18674.	0.	26370.	0.	0.	0.	0.
OHIO	689242.	0.	716856.	0.	0.	0.	6795.
OKLAHOMA	41636.	0.	81450.	0.	0.	0.	683.
OREGON	135162.	0.	181205.	0.	0.	0.	3430.
PENNSYLVANIA	704239.	0.	1949912.	0.	0.	0.	5254.
RHODE ISLAND	48783.	0.	148730.	0.	0.	0.	3296.
SOUTH CAROLINA	74710.	0.	174225.	0.	0.	0.	0.
SOUTH DAKOTA	17490.	0.	37009.	0.	0.	0.	201.
TENNESSEE	152114.	0.	414930.	0.	0.	0.	3528.
TEXAS	189959.	0.	1077876.	0.	0.	0.	6791.
UTAH	52544.	0.	57302.	0.	0.	0.	710.
VERMONT	23099.	0.	135035.	0.	0.	0.	902.
VIRGINIA	114911.	0.	213425.	0.	0.	0.	1073.
WASHINGTON	158023.	0.	322752.	0.	0.	0.	7151.
WEST VIRGINIA	52724.	0.	153938.	0.	0.	0.	931.
WISCONSIN	131741.	0.	334814.	0.	0.	0.	1523.
WYOMING	5818.	0.	43916.	0.	0.	0.	254.
NATIONAL TOTAL	8970298.	0.	22916240.	0.	0.	0.	238237.

LTC RECIPIENTS
YEAR: 1985

MEDICARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	6361.	0.	19663.	0.	0.	0.	570.	26614.
ALASKA	3.	0.	428.	0.	0.	0.	0.	432.
ARIZONA	2704.	0.	5300.	0.	0.	0.	619.	8623.
ARKANSAS	651.	0.	3787.	0.	0.	0.	77.	4514.
CALIFORNIA	43065.	0.	107513.	0.	0.	0.	5744.	156323.
COLORADO	2824.	0.	11567.	0.	0.	0.	371.	14862.
CONNECTICUT	5609.	0.	29049.	0.	0.	0.	1311.	35969.
DELAWARE	325.	0.	2580.	0.	0.	0.	36.	2942.
DIST OF COLUMBIA	490.	0.	3571.	0.	0.	0.	12.	4074.
FLORIDA	18670.	0.	106165.	0.	0.	0.	3698.	128534.
GEORGIA	4029.	0.	17262.	0.	0.	0.	361.	21652.
HAWAII	897.	0.	3117.	0.	0.	0.	126.	4140.
IDAHO	1080.	0.	5257.	0.	0.	0.	153.	6490.
ILLINOIS	16608.	0.	54499.	0.	0.	0.	574.	71681.
INDIANA	6405.	0.	10402.	0.	0.	0.	412.	17219.
IOWA	3424.	0.	8887.	0.	0.	0.	114.	12424.
KANSAS	2026.	0.	5233.	0.	0.	0.	192.	7501.
KENTUCKY	5684.	0.	11345.	0.	0.	0.	277.	17306.
LOUISIANA	1693.	0.	18239.	0.	0.	0.	216.	20148.
MAINE	1553.	0.	10949.	0.	0.	0.	267.	12778.
MARYLAND	3614.	0.	14439.	0.	0.	0.	354.	18457.
MASSACHUSETTS	4340.	0.	52257.	0.	0.	0.	900.	57527.
MICHIGAN	12894.	0.	33475.	0.	0.	0.	1256.	47625.
MINNESOTA	4348.	0.	10703.	0.	0.	0.	326.	15377.
MISSISSIPPI	598.	0.	21368.	0.	0.	0.	50.	22022.
MISSOURI	6408.	0.	37718.	0.	0.	0.	225.	44350.
MONTANA	1463.	0.	2833.	0.	0.	0.	12.	4308.
NEBRASKA	2340.	0.	5529.	0.	0.	0.	50.	7919.
NEVADA	931.	0.	1490.	0.	0.	0.	307.	2729.
NEW HAMPSHIRE	1480.	0.	5709.	0.	0.	0.	291.	7479.
NEW JERSEY	9724.	0.	45281.	0.	0.	0.	1033.	57038.
NEW MEXICO	190.	0.	4459.	0.	0.	0.	45.	4694.
NEW YORK	16702.	0.	93998.	0.	0.	0.	3521.	114221.
NORTH CAROLINA	6150.	0.	21570.	0.	0.	0.	959.	28678.
NORTH DAKOTA	707.	0.	1373.	0.	0.	0.	0.	2081.
OHIO	17628.	0.	38541.	0.	0.	0.	849.	57018.
OKLAHOMA	1603.	0.	6079.	0.	0.	0.	85.	7768.
OREGON	4677.	0.	11397.	0.	0.	0.	429.	16502.
PENNSYLVANIA	18932.	0.	107138.	0.	0.	0.	657.	126777.
RHODE ISLAND	1807.	0.	6552.	0.	0.	0.	412.	8771.
SOUTH CAROLINA	2839.	0.	11387.	0.	0.	0.	0.	14196.
SOUTH DAKOTA	3775.	0.	1675.	0.	0.	0.	25.	2333.
TENNESSEE	5719.	0.	19951.	0.	0.	0.	441.	24167.
TEXAS	1311.	0.	47275.	0.	0.	0.	849.	53903.
UTAH	662.	0.	2301.	0.	0.	0.	89.	4301.
VERMONT	3024.	0.	6523.	0.	0.	0.	113.	7298.
VIRGINIA	6811.	0.	11434.	0.	0.	0.	134.	14593.
WASHINGTON	1280.	0.	20823.	0.	0.	0.	894.	28528.
WEST VIRGINIA	3909.	0.	8796.	0.	0.	0.	116.	10192.
WISCONSIN	142.	0.	18196.	0.	0.	0.	190.	22296.
WYOMING		0.	1459.	0.	0.	0.	32.	1632.

LTC EXPENDITURES (\$1000)
YEAR: 1985

E-52

MEDICARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	8647.	0.	20389.	0.	0.	0.	473.	30009.
ALASKA	0.	0.	237.	0.	0.	0.	0.	237.
ARIZONA	5654.	0.	5014.	0.	0.	0.	603.	11271.
ARKANSAS	1199.	0.	3416.	0.	0.	0.	56.	4672.
CALIFORNIA	89289.	0.	114560.	0.	0.	0.	1783.	211633.
COLORADO	4786.	0.	10979.	0.	0.	0.	377.	16142.
CONNECTICUT	8188.	0.	25254.	0.	0.	0.	1586.	35038.
DELAWARE	712.	0.	2243.	0.	0.	0.	42.	2998.
DIST OF COLUMBIA	1162.	0.	3736.	0.	0.	0.	18.	4915.
FLORIDA	37355.	0.	135027.	0.	0.	0.	3509.	175891.
GEORGIA	7077.	0.	17279.	0.	0.	0.	275.	24632.
HAWAII	3689.	0.	2695.	0.	0.	0.	149.	6534.
IDAHO	1097.	0.	5030.	0.	0.	0.	138.	6265.
ILLINOIS	39585.	0.	77656.	0.	0.	0.	687.	117929.
INDIANA	13107.	0.	7868.	0.	0.	0.	378.	21352.
IOWA	8145.	0.	4071.	0.	0.	0.	104.	12320.
KANSAS	5016.	0.	4623.	0.	0.	0.	166.	9805.
KENTUCKY	11095.	0.	9319.	0.	0.	0.	233.	20648.
LOUISIANA	4460.	0.	25134.	0.	0.	0.	166.	29760.
MAINE	5164.	0.	8463.	0.	0.	0.	280.	13912.
MARYLAND	8434.	0.	13920.	0.	0.	0.	400.	22754.
MASSACHUSETTS	18753.	0.	39620.	0.	0.	0.	1161.	59533.
MICHIGAN	33950.	0.	33698.	0.	0.	0.	1589.	69237.
MINNESOTA	12897.	0.	8014.	0.	0.	0.	304.	21215.
MISSISSIPPI	2022.	0.	26574.	0.	0.	0.	36.	28632.
MISSOURI	19483.	0.	37811.	0.	0.	0.	197.	57492.
MONTANA	2232.	0.	1839.	0.	0.	0.	11.	4082.
NEBRASKA	5626.	0.	4044.	0.	0.	0.	44.	9713.
NEVADA	2327.	0.	1392.	0.	0.	0.	343.	4061.
NEW HAMPSHIRE	4306.	0.	3351.	0.	0.	0.	320.	7977.
NEW JERSEY	30214.	0.	56585.	0.	0.	0.	1284.	88084.
NEW MEXICO	509.	0.	2974.	0.	0.	0.	40.	3824.
NEW YORK	72830.	0.	90938.	0.	0.	0.	4887.	168755.
NORTH CAROLINA	15929.	0.	12227.	0.	0.	0.	692.	28848.
NORTH DAKOTA	1139.	0.	554.	0.	0.	0.	0.	1703.
OHIO	48254.	0.	25291.	0.	0.	0.	954.	74498.
OKLAHOMA	5586.	0.	4275.	0.	0.	0.	69.	9931.
OREGON	9810.	0.	11304.	0.	0.	0.	508.	21621.
PENNSYLVANIA	47501.	0.	85991.	0.	0.	0.	747.	134238.
RHODE ISLAND	3784.	0.	5548.	0.	0.	0.	534.	9916.
SOUTH CAROLINA	3569.	0.	9814.	0.	0.	0.	0.	13383.
SOUTH DAKOTA	900.	0.	566.	0.	0.	0.	20.	1486.
TENNESSEE	10840.	0.	19449.	0.	0.	0.	354.	30643.
TEXAS	16918.	0.	58076.	0.	0.	0.	683.	75737.
UTAH	3831.	0.	1922.	0.	0.	0.	84.	5818.
VERMONT	1511.	0.	4436.	0.	0.	0.	115.	6062.
VIRGINIA	8707.	0.	10249.	0.	0.	0.	119.	19074.
WASHINGTON	10350.	0.	17542.	0.	0.	0.	1012.	28904.
WEST VIRGINIA	3495.	0.	6573.	0.	0.	0.	104.	10173.
WISCONSIN	8089.	0.	13748.	0.	0.	0.	184.	22061.
WYOMING	342.	0.	1556.	0.	0.	0.	28.	1926.
NATIONAL TOTAL	669973.	0.	1094510.	0.	0.	0.	33848.	1797311.

LTC DEMAND
YEAR: 1990

MEDICARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	493322.	0.	469998.	0.	0.	0.	0.	968319.
ALASKA	7.	0.	4313.	0.	0.	0.	0.	4319.
ARIZONA	249840.	0.	185689.	0.	0.	0.	0.	475530.
ARKANSAS	45973.	0.	70486.	0.	0.	0.	0.	116459.
CALIFORNIA	3248827.	0.	2282829.	0.	0.	0.	0.	5531658.
COLORADO	203338.	0.	253284.	0.	0.	0.	0.	457323.
CONNECTICUT	484320.	0.	734993.	0.	0.	0.	0.	1219313.
DELAWARE	43319.	0.	77380.	0.	0.	0.	0.	120699.
DIST OF COLUMBIA	41796.	0.	73915.	0.	0.	0.	0.	115711.
FLORIDA	2425264.	0.	2995108.	0.	0.	0.	0.	5420372.
GEORGIA	318410.	0.	346705.	0.	0.	0.	0.	665115.
HAWAII	151243.	0.	59962.	0.	0.	0.	0.	211205.
IDAH0	48421.	0.	148499.	0.	0.	0.	0.	236920.
ILLINOIS	1385323.	0.	1492481.	0.	0.	0.	0.	2878804.
INDIANA	575307.	0.	213447.	0.	0.	0.	0.	793754.
IOWA	220093.	0.	179315.	0.	0.	0.	0.	399408.
KANSAS	170547.	0.	144595.	0.	0.	0.	0.	315141.
KENTUCKY	457374.	0.	206688.	0.	0.	0.	0.	664062.
LOUISIANA	198024.	0.	635609.	0.	0.	0.	0.	833693.
MAINE	147593.	0.	251411.	0.	0.	0.	0.	399004.
MARYLAND	359841.	0.	309229.	0.	0.	0.	0.	669070.
MASSACHUSETTS	557425.	0.	1264375.	0.	0.	0.	0.	1821799.
MICHIGAN	1437317.	0.	522450.	0.	0.	0.	0.	2059767.
MINNESOTA	406283.	0.	225038.	0.	0.	0.	0.	631371.
MISSISSIPPI	55323.	0.	824597.	0.	0.	0.	0.	879919.
MISSOURI	516326.	0.	1023009.	0.	0.	0.	0.	1539334.
MONTANA	97342.	0.	70151.	0.	0.	0.	0.	167503.
NEBRASKA	158898.	0.	105938.	0.	0.	0.	0.	264837.
NEVADA	161726.	0.	51566.	0.	0.	0.	0.	213291.
NEW HAMPSHIRE	184134.	0.	148133.	0.	0.	0.	0.	332316.
NEW JERSEY	1053743.	0.	1352404.	0.	0.	0.	0.	2405147.
NEW MEXICO	33697.	0.	102707.	0.	0.	0.	0.	136404.
NEW YORK	3085925.	0.	2116330.	0.	0.	0.	0.	5204255.
NORTH CAROLINA	1012799.	0.	531628.	0.	0.	0.	0.	1544426.
NORTH DAKOTA	40522.	0.	30137.	0.	0.	0.	0.	70659.
OHIO	1733367.	0.	808610.	0.	0.	0.	0.	2546977.
OKLAHOMA	105603.	0.	222838.	0.	0.	0.	0.	200493.
OREGON	476772.	0.	2153053.	0.	0.	0.	0.	699611.
PENNSYLVANIA	1634150.	0.	171438.	0.	0.	0.	0.	3787203.
RHODE ISLAND	181606.	0.	210111.	0.	0.	0.	0.	353044.
SOUTH CAROLINA	176331.	0.	42231.	0.	0.	0.	0.	386412.
SOUTH DAKOTA	42568.	0.	490038.	0.	0.	0.	0.	84819.
TENNESSEE	464733.	0.	1267252.	0.	0.	0.	0.	954771.
TEXAS	625543.	0.	67238.	0.	0.	0.	0.	1892844.
UTAH	151452.	0.	157418.	0.	0.	0.	0.	219160.
VERMONT	34045.	0.	246794.	0.	0.	0.	0.	241453.
VIRGINIA	305348.	0.	375917.	0.	0.	0.	0.	552182.
WASHINGTON	502245.	0.	173586.	0.	0.	0.	0.	878163.
WEST VIRGINIA	141758.	0.	385036.	0.	0.	0.	0.	315372.
WISCONSIN	334777.	0.	51727.	0.	0.	0.	0.	720313.
WYOMING	22191.	0.		0.	0.	0.	0.	73918.
NATIONAL TOTAL	27144432	0.	2443304	0.	0.	0.	0.	536536

LTC SUPPLY
YEAR: 1990

MEDICARE

YEAR	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER
ALABAMA	150335.	0.	523623.	0.	0.	0.
ALASKA	436.	0.	6295.	0.	0.	0.
ARIZONA	71645.	0.	110354.	0.	0.	0.
ARKANSAS	15158.	0.	80574.	0.	0.	0.
CALIFORNIA	1033555.	0.	2714707.	0.	0.	0.
COLORADO	62409.	0.	237558.	0.	0.	0.
CONNECTICUT	131911.	0.	944768.	0.	0.	0.
DELAWARE	14174.	0.	79752.	0.	0.	0.
DIST OF COLUMBIA	18473.	0.	92326.	0.	0.	0.
FLORIDA	599310.	0.	3127945.	0.	0.	0.
GEORGIA	100327.	0.	501670.	0.	0.	0.
HAWAII	41254.	0.	64046.	0.	0.	0.
IDAH0	23543.	0.	194234.	0.	0.	0.
ILLINOIS	587932.	0.	2440659.	0.	0.	0.
INDIANA	218406.	0.	253931.	0.	0.	0.
IOWA	91087.	0.	229360.	0.	0.	0.
KANSAS	61190.	0.	202366.	0.	0.	0.
KENTUCKY	183699.	0.	204359.	0.	0.	0.
LOUISIANA	64690.	0.	642607.	0.	0.	0.
MAINE	44346.	0.	322439.	0.	0.	0.
MARYLAND	125398.	0.	355455.	0.	0.	0.
MASSACHUSETTS	158397.	0.	1614935.	0.	0.	0.
MICHIGAN	523515.	0.	954278.	0.	0.	0.
MINNESOTA	133479.	0.	230987.	0.	0.	0.
MISSISSIPPI	18968.	0.	1125102.	0.	0.	0.
MISSOURI	217230.	0.	1400479.	0.	0.	0.
MONTANA	45210.	0.	79013.	0.	0.	0.
NEBRASKA	70204.	0.	128331.	0.	0.	0.
NEVADA	32593.	0.	39907.	0.	0.	0.
NEW HAMPSHIRE	50916.	0.	143799.	0.	0.	0.
NEW JERSEY	370496.	0.	1546041.	0.	0.	0.
NEW MEXICO	8666.	0.	82950.	0.	0.	0.
NEW YORK	779963.	0.	2755120.	0.	0.	0.
NORTH CAROLINA	300711.	0.	637384.	0.	0.	0.
NORTH DAKOTA	23690.	0.	49435.	0.	0.	0.
OHIO	689242.	0.	858975.	0.	0.	0.
OKLAHOMA	41686.	0.	114130.	0.	0.	0.
OREGON	135162.	0.	199099.	0.	0.	0.
PENNSYLVANIA	704239.	0.	2747995.	0.	0.	0.
RHODE ISLAND	48783.	0.	154322.	0.	0.	0.
SOUTH CAROLINA	101127.	0.	180804.	0.	0.	0.
SOUTH DAKOTA	17490.	0.	65727.	0.	0.	0.
TENNESSEE	152114.	0.	501953.	0.	0.	0.
TEXAS	188959.	0.	1365542.	0.	0.	0.
UTAH	52544.	0.	66871.	0.	0.	0.
VERMONT	23099.	0.	166972.	0.	0.	0.
VIRGINIA	114911.	0.	291028.	0.	0.	0.
WASHINGTON	153023.	0.	518751.	0.	0.	0.
WEST VIRGINIA	52724.	0.	218865.	0.	0.	0.
WISCONSIN	131741.	0.	389323.	0.	0.	0.
WYOMING	5818.	0.	65259.	0.	0.	0.
NATIONAL TOTAL	9002193.	0.	32034176.	0.	0.	0.

LIC UTILIZATION
YEAR: 1990

MEDICARE

STATE	SIN (DAYS)	ICF (DAYS)	HOME HEALTH (VISITS)	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL
ALABAMA	156335	0	459977	0	0	0	36327
ALASKA	7	0	4313	0	0	0	0
ARIZONA	71645	0	110354	0	0	0	21462
ARKANSAS	15158	0	70486	0	0	0	3450
CALIFORNIA	103365	0	2282828	0	0	0	239373
COLORADO	62409	0	237558	0	0	0	16500
CONNECTICUT	131811	0	734993	0	0	0	38900
DELAWARE	14174	0	77330	0	0	0	1733
DIST OF COLUMBIA	16473	0	73914	0	0	0	1606
FLORIDA	599310	0	2995108	0	0	0	149179
GEORGIA	100327	0	345705	0	0	0	22712
HAWAII	41254	0	59962	0	0	0	6182
IDAHO	23543	0	148499	0	0	0	7724
ILLINOIS	587932	0	1492430	0	0	0	58563
INDIANA	218406	0	214447	0	0	0	27181
IOWA	91087	0	179215	0	0	0	12640
KANSAS	61190	0	144595	0	0	0	9422
KENTUCKY	188699	0	294359	0	0	0	21019
LOUISIANA	64690	0	35669	0	0	0	9041
MAINE	44346	0	251411	0	0	0	9314
MARYLAND	125398	0	309229	0	0	0	17495
MASSACHUSETTS	158397	0	1264374	0	0	0	28434
MICHIGAN	523515	0	622450	0	0	0	58318
MINNESOTA	133479	0	225088	0	0	0	23125
MISSISSIPPI	18968	0	824596	0	0	0	2983
MISSOURI	217230	0	1023009	0	0	0	22976
MONTANA	45210	0	70161	0	0	0	4373
NEBRASKA	70204	0	105938	0	0	0	7699
NEVADA	32594	0	39907	0	0	0	9540
NEW HAMPSHIRE	50916	0	143799	0	0	0	10053
NEW JERSEY	370496	0	1352403	0	0	0	46604
NEW MEXICO	8468	0	82950	0	0	0	1470
NEW YORK	779983	0	2118329	0	0	0	128459
NORTH CAROLINA	300711	0	531628	0	0	0	37772
NORTH DAKOTA	23690	0	30137	0	0	0	1660
OHIO	689242	0	804610	0	0	0	69726
OKLAHOMA	41686	0	93890	0	0	0	6499
OREGON	135162	0	199099	0	0	0	30774
PENNSYLVANIA	704239	0	2153053	0	0	0	65241
RHODE ISLAND	48783	0	164322	0	0	0	12807
SOUTH CAROLINA	101127	0	140804	0	0	0	7310
SOUTH DAKOTA	17490	0	42231	0	0	0	2372
TENNESSEE	152114	0	490038	0	0	0	20160
TEXAS	188954	0	1267261	0	0	0	34617
UTAH	52544	0	66471	0	0	0	9330
VERMONT	23099	0	157414	0	0	0	4537
VIRGINIA	114911	0	245794	0	0	0	12978
WASHINGTON	158023	0	375917	0	0	0	38534
WEST VIRGINIA	52724	0	173584	0	0	0	5626
WISCONSIN	131741	0	386036	0	0	0	15674
WYOMING	5818	0	51727	0	0	0	1028

LTC RECIPIENTS
YEAR: 1990

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MEDICARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	5381.	0.	22815.	0.	0.	0.	4541.	33737.
ALASKA	7.	0.	507.	0.	0.	0.	0.	514.
ARIZONA	2764.	0.	5545.	0.	0.	0.	2685.	10934.
ARKANSAS	651.	0.	4374.	0.	0.	0.	431.	5460.
CALIFORNIA	43055.	0.	124067.	0.	0.	0.	29922.	197054.
COLORADO	2824.	0.	13125.	0.	0.	0.	2062.	18011.
CONNECTICUT	5509.	0.	32959.	0.	0.	0.	4463.	43431.
DELAWARE	325.	0.	2976.	0.	0.	0.	217.	3518.
DIST OF COLUMBIA	490.	0.	3890.	0.	0.	0.	201.	4581.
FLORIDA	13670.	0.	135525.	0.	0.	0.	19647.	172843.
GEORGIA	4029.	0.	20041.	0.	0.	0.	2839.	26909.
HAWAII	897.	0.	3656.	0.	0.	0.	773.	5326.
IDAHO	1060.	0.	6137.	0.	0.	0.	966.	8233.
ILLINOIS	16608.	0.	60918.	0.	0.	0.	7320.	84866.
INDIANA	5405.	0.	11472.	0.	0.	0.	3398.	21675.
IOWA	3424.	0.	10247.	0.	0.	0.	1580.	15251.
KANSAS	2026.	0.	6025.	0.	0.	0.	1174.	9229.
KENTUCKY	5634.	0.	12853.	0.	0.	0.	2627.	21165.
LOUISIANA	1673.	0.	21049.	0.	0.	0.	1130.	23872.
MAINE	1563.	0.	12762.	0.	0.	0.	1164.	15489.
MARYLAND	3614.	0.	16381.	0.	0.	0.	2187.	22162.
MASSACHUSETTS	4340.	0.	50536.	0.	0.	0.	3554.	66430.
MICHIGAN	12894.	0.	37724.	0.	0.	0.	7290.	57908.
MINNESOTA	4348.	0.	12717.	0.	0.	0.	2891.	19955.
MISSISSIPPI	598.	0.	25084.	0.	0.	0.	373.	26035.
MISSOURI	6408.	0.	42625.	0.	0.	0.	2872.	51905.
MONTANA	1463.	0.	3160.	0.	0.	0.	547.	5170.
NEBRASKA	2340.	0.	6306.	0.	0.	0.	962.	9608.
NEVADA	931.	0.	1603.	0.	0.	0.	1193.	3727.
NEW HAMPSHIRE	1480.	0.	6536.	0.	0.	0.	1257.	9273.
NEW JERSEY	9724.	0.	52828.	0.	0.	0.	5825.	68378.
NEW MEXICO	190.	0.	4558.	0.	0.	0.	184.	4932.
NEW YORK	16702.	0.	103840.	0.	0.	0.	16057.	135599.
NORTH CAROLINA	6150.	0.	24842.	0.	0.	0.	4721.	35713.
NORTH DAKOTA	897.	0.	1570.	0.	0.	0.	207.	2674.
OHIO	17628.	0.	43474.	0.	0.	0.	8716.	69817.
OKLAHOMA	1803.	0.	7007.	0.	0.	0.	812.	9422.
OREGON	4577.	0.	12522.	0.	0.	0.	3847.	21046.
PENNSYLVANIA	18982.	0.	113300.	0.	0.	0.	8155.	145437.
RHODE ISLAND	1807.	0.	7239.	0.	0.	0.	1601.	10647.
SOUTH CAROLINA	3802.	0.	11817.	0.	0.	0.	914.	16533.
SOUTH DAKOTA	634.	0.	1911.	0.	0.	0.	296.	2841.
TENNESSEE	3775.	0.	23335.	0.	0.	0.	2520.	29630.
TEXAS	5779.	0.	55542.	0.	0.	0.	4327.	65687.
UTAH	1911.	0.	2636.	0.	0.	0.	1166.	5762.
VERMONT	662.	0.	7605.	0.	0.	0.	567.	8834.
VIRGINIA	3024.	0.	13198.	0.	0.	0.	1622.	17844.
WASHINGTON	6911.	0.	24253.	0.	0.	0.	4817.	35881.
WEST VIRGINIA	1240.	0.	9319.	0.	0.	0.	703.	11902.
WISCONSIN	3909.	0.	20930.	0.	0.	0.	1959.	26849.
WYOMING	142.	0.	1719.	0.	0.	0.	129.	1989.
NATIONAL TOTAL	272637.	0.	1271205.	0.	0.	0.	178314.	1722631.

LIC EXPENDITURES (\$1000)

YEAR: 1990

MEDICARE

STATE	SNF	ICF	HOME HEALTH	ICF/MR	PERSONAL CARE	HOMEMAKER	HOSPITAL	TOTAL
ALABAMA	12554	0	36453	0	0	0	5629	54635
ALASKA	1	0	421	0	0	0	0	422
ARIZONA	8383	0	7890	0	0	0	3902	20176
ARKANSAS	1779	0	5940	0	0	0	475	8193
CALIFORNIA	132978	0	193834	0	0	0	6059	392371
COLORADO	7086	0	18575	0	0	0	3130	28790
CONNECTICUT	11940	0	43107	0	0	0	8784	63872
DELAWARE	1025	0	3891	0	0	0	380	5297
DIST OF COLUMBIA	1700	0	6120	0	0	0	427	8247
FLORIDA	54051	0	259226	0	0	0	25427	340306
GEORGIA	10436	0	30170	0	0	0	3236	43842
HAWAII	5502	0	4757	0	0	0	1360	11626
IDAH0	1571	0	8905	0	0	0	1303	11779
ILLINOIS	58193	0	130562	0	0	0	13083	201838
INDIANA	19134	0	13507	0	0	0	4649	37290
IOWA	12146	0	7061	0	0	0	2159	21368
KANSAS	7452	0	7928	0	0	0	1520	16900
KENTUCKY	16179	0	15877	0	0	0	3300	35356
LOUISIANA	6567	0	43626	0	0	0	1300	51492
MAINE	7777	0	14848	0	0	0	1824	24449
MARYLAND	12399	0	23640	0	0	0	3688	39728
MASSACHUSETTS	28261	0	66708	0	0	0	6848	101817
MICHIGAN	49818	0	57116	0	0	0	13781	120715
MINNESOTA	19293	0	14320	0	0	0	4036	37649
MISSISSIPPI	3035	0	40878	0	0	0	362	50276
MISSOURI	29059	0	54276	0	0	0	3767	97102
MONTANA	3212	0	3086	0	0	0	777	7074
NEBRASKA	8349	0	6937	0	0	0	1244	16530
NEVADA	3433	0	2251	0	0	0	1988	7672
NEW HAMPSHIRE	6407	0	5771	0	0	0	2063	14241
NEW JERSEY	44860	0	97143	0	0	0	10818	152821
NEW MEXICO	1210	0	4572	0	0	0	247	6029
NEW YORK	108883	0	151154	0	0	0	33285	293331
NORTH CAROLINA	23058	0	21180	0	0	0	5090	49328
NORTH DAKOTA	2112	0	970	0	0	0	193	3279
OHIO	71075	0	42913	0	0	0	14622	128630
OKLAHOMA	8451	0	7411	0	0	0	986	16848
OREGON	14434	0	18679	0	0	0	6804	39967
PENNSYLVANIA	69832	0	142812	0	0	0	13849	226493
RHODE ISLAND	5605	0	9302	0	0	0	3101	18008
SOUTH CAROLINA	6936	0	15318	0	0	0	993	23247
SOUTH DAKOTA	1298	0	972	0	0	0	349	2019
TENNESSEE	15987	0	34209	0	0	0	3023	53220
TEXAS	25330	0	102699	0	0	0	5199	133227
UTAH	5660	0	3340	0	0	0	1651	10651
VERMONT	2218	0	7778	0	0	0	866	10562
VIRGINIA	12890	0	17789	0	0	0	2137	32816
WASHINGTON	15194	0	30731	0	0	0	8144	54069
WEST VIRGINIA	5133	0	11149	0	0	0	943	17225
WISCONSIN	11822	0	23907	0	0	0	2830	34559
WYOMING	498	0	2758	0	0	0	168	3423

TITLE XX PROJECTIONS

TITLE XX RECIPIENTS

STATE	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Alabama	1729.	2223.	2228.	2603.	2986.	3363.	3743.	4123.	4509.	4828.	5208.	5644.	6023.	6404.
Alaska	131.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Arizona	440.	887.	923.	1232.	1541.	1850.	2159.	2468.	2777.	3086.	3395.	3704.	4013.	4322.
Arkansas	1325.	1322.	3613.	4434.	5255.	6076.	6897.	7718.	8539.	9360.	10181.	11002.	11823.	12644.
California	43151.	49131.	48042.	49615.	51190.	52764.	54338.	55912.	57486.	59060.	60634.	62209.	63762.	65356.
Colorado	2134.	2221.	1752.	1823.	1894.	1965.	2036.	2107.	2178.	2249.	2320.	2391.	2462.	2533.
Connecticut	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Delaware	100.	119.	124.	146.	168.	190.	212.	234.	256.	273.	300.	322.	344.	366.
Dist of Columbia	173.	296.	411.	461.	511.	561.	611.	661.	711.	761.	811.	861.	911.	961.
Florida	3617.	2769.	4240.	4422.	4504.	4786.	4908.	5150.	5332.	5514.	5696.	5878.	6060.	6242.
Georgia	3360.	4302.	3063.	3625.	4182.	4739.	5295.	5853.	6410.	6967.	7524.	8081.	8638.	9195.
Hawaii	523.	674.	677.	756.	835.	914.	993.	1072.	1151.	1230.	1309.	1388.	1467.	1546.
Idaho	1480.	677.	608.	575.	544.	512.	480.	448.	416.	384.	352.	320.	288.	256.
Illinois	6064.	7279.	5724.	5426.	5129.	4830.	4532.	4234.	3936.	3638.	3340.	3042.	2744.	2446.
Indiana	1844.	3328.	1221.	1587.	1953.	2319.	2685.	3051.	3417.	3782.	4149.	4515.	4881.	5247.
Iowa	7109.	7509.	7484.	7677.	7870.	8063.	8256.	8449.	8642.	8835.	9028.	9221.	9414.	9607.
Kansas	3432.	3633.	3689.	4465.	5241.	6017.	6793.	7569.	8345.	9121.	9897.	10673.	11449.	12225.
Kentucky	4.	1135.	4733.	6265.	7797.	9329.	10861.	12393.	13925.	15457.	16989.	18521.	20053.	21585.
Louisiana	2253.	2567.	2349.	2765.	3221.	3657.	4093.	4529.	4965.	5401.	5837.	6273.	6709.	7145.
Maine	1776.	1872.	1719.	1843.	1957.	2091.	2215.	2339.	2463.	2587.	2711.	2835.	2959.	3083.
Maryland	1727.	1510.	1713.	1629.	1540.	1451.	1362.	1273.	1184.	1095.	1006.	917.	828.	739.
Massachusetts	10458.	8250.	14504.	15517.	16530.	17543.	18556.	19569.	20582.	21595.	22608.	23621.	24634.	25647.
Michigan	11520.	12043.	12742.	18443.	20144.	23845.	27546.	31247.	34948.	38649.	42350.	46051.	49752.	53453.
Minnesota	4455.	5773.	5607.	5865.	6123.	6381.	6639.	6897.	7155.	7413.	7671.	7929.	8187.	8445.
Mississippi	1407.	4146.	2127.	2775.	3423.	4071.	4719.	5367.	6015.	6663.	7311.	7959.	8607.	9255.
Missouri	2685.	2837.	3670.	4104.	4538.	4972.	5406.	5840.	6274.	6708.	7142.	7576.	8010.	8444.
Montana	1593.	1679.	1311.	1574.	1837.	2100.	2363.	2626.	2889.	3152.	3415.	3678.	3941.	4204.
Nebraska	2567.	3214.	3555.	4023.	4491.	4959.	5427.	5895.	6363.	6831.	7299.	7767.	8235.	8703.
Nevada	364.	412.	401.	443.	495.	542.	589.	636.	683.	730.	777.	824.	871.	918.
New Hampshire	4859.	9536.	1173.	1388.	1603.	1813.	2033.	2248.	2463.	2678.	2893.	3108.	3323.	3533.
New Jersey	3656.	5583.	5510.	6213.	6926.	7634.	8342.	9050.	9758.	10466.	11174.	11882.	12590.	13298.
New Mexico	1963.	2033.	2788.	3061.	3334.	3607.	3880.	4153.	4426.	4699.	4972.	5245.	5518.	5791.
New York	7029.	6366.	6304.	5975.	5648.	5320.	4992.	4664.	4336.	4008.	3680.	3352.	3024.	2696.
North Carolina	8125.	7114.	5395.	6171.	6947.	7723.	8499.	9275.	10051.	10827.	11603.	12379.	13155.	13931.
North Dakota	857.	961.	1077.	1188.	1299.	1410.	1521.	1632.	1743.	1854.	1965.	2076.	2187.	2298.
Ohio	4494.	5743.	3754.	5619.	7482.	9346.	11210.	13074.	14938.	16802.	18666.	20530.	22394.	24258.
Oklahoma	99.	102.	102.	126.	150.	174.	198.	222.	246.	270.	294.	318.	342.	366.
Oregon	2242.	2728.	3095.	3523.	3950.	4377.	4804.	5231.	5658.	6085.	6512.	6939.	7366.	7793.
Pennsylvania	7787.	8765.	9398.	10204.	11010.	11815.	12622.	13428.	14234.	15040.	15846.	16652.	17458.	18264.
Rhode Island	413.	760.	1177.	1525.	1873.	2221.	2569.	2917.	3265.	3613.	3961.	4309.	4657.	5005.
South Carolina	2306.	2453.	2592.	2457.	2322.	2187.	2052.	1917.	1782.	1647.	1512.	1377.	1242.	1107.
South Dakota	834.	1324.	1049.	1265.	1481.	1697.	1913.	2129.	2345.	2561.	2777.	2993.	3209.	3425.
Tennessee	3181.	1798.	1936.	1835.	1732.	1629.	1525.	1423.	1320.	1217.	1114.	1011.	908.	805.
Texas	24601.	36859.	27271.	23117.	28963.	29809.	30655.	31501.	32347.	33193.	34039.	34885.	35731.	36577.
Utah	141.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Vermont	197.	503.	225.	283.	341.	399.	457.	515.	573.	631.	689.	747.	805.	863.
Virginia	3411.	3529.	3694.	3833.	3982.	4125.	4270.	4414.	4559.	4702.	4846.	4989.	5134.	5278.
Washington	5136.	6774.	6978.	4651.	10324.	11997.	13670.	15343.	17016.	18689.	20362.	22035.	23708.	25381.
West Virginia	4910.	4140.	3689.	3684.	3689.	3689.	3689.	3689.	3689.	3689.	3689.	3689.	3689.	3689.
Wisconsin	8319.	10514.	10514.	12693.	14882.	17066.	19250.	21434.	23618.	25802.	27986.	30170.	32354.	34538.
Wyoming	456.	461.	421.	509.	555.	602.	649.	695.	743.	790.	837.	884.	931.	973.

TITLE XX EXPENDITURES (2000)

STATE	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Alabama	620.	1055.	700.	854.	1008.	1162.	1315.	1470.	1624.	1773.	1932.	2085.	2240.	2394.
Alaska	337.	2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Arizona	239.	371.	904.	1134.	1464.	1744.	2024.	2304.	2584.	2864.	3144.	3424.	3704.	3984.
Arkansas	524.	379.	662.	806.	950.	1094.	1238.	1382.	1526.	1670.	1814.	1958.	2102.	2246.
California	79261.	94679.	140052.	163193.	186314.	209445.	232576.	255707.	278838.	301969.	325100.	348231.	371362.	394493.
Colorado	2308.	2761.	4672.	5313.	5964.	6610.	7256.	7902.	8548.	9194.	9840.	10486.	11132.	11778.
Connecticut	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Delaware	213.	249.	276.	303.	330.	357.	384.	411.	438.	465.	492.	519.	546.	573.
District of Columbia	705.	1949.	1539.	1732.	1925.	2113.	2311.	2504.	2697.	2890.	3083.	3276.	3469.	3662.
Florida	2950.	2377.	3346.	3807.	4268.	4729.	5190.	5651.	6112.	6573.	7034.	7495.	7956.	8417.
Georgia	1535.	3503.	3953.	5145.	6339.	7532.	8725.	9918.	11111.	12304.	13497.	14690.	15883.	17076.
Hawaii	1381.	1258.	1549.	1629.	1709.	1789.	1869.	1949.	2029.	2109.	2189.	2269.	2349.	2429.
Idaho	1521.	798.	969.	969.	969.	969.	969.	969.	969.	969.	969.	969.	969.	969.
Illinois	8345.	8338.	11095.	11095.	11095.	11095.	11095.	11095.	11095.	11095.	11095.	11095.	11095.	11095.
Indiana	1595.	2287.	2895.	3503.	4111.	4719.	5327.	5935.	6543.	7151.	7759.	8367.	8975.	9583.
Iowa	5308.	6003.	6911.	7835.	8759.	9683.	10607.	11531.	12455.	13379.	14303.	15227.	16151.	17075.
Kansas	1173.	1507.	2280.	2825.	3370.	3915.	4460.	5005.	5550.	6095.	6640.	7185.	7730.	8275.
Kentucky	848.	1591.	3614.	4768.	5922.	7076.	8230.	9384.	10538.	11692.	12846.	14000.	15154.	16308.
Louisiana	7321.	8583.	9694.	10828.	11962.	13096.	14230.	15364.	16498.	17632.	18766.	19900.	21034.	22168.
Maine	1043.	1031.	1290.	1392.	1494.	1596.	1698.	1800.	1902.	2004.	2106.	2208.	2310.	2412.
Maryland	1919.	1919.	1919.	1919.	1919.	1919.	1919.	1919.	1919.	1919.	1919.	1919.	1919.	1919.
Massachusetts	13354.	11416.	20984.	24049.	27114.	30179.	33244.	36309.	39374.	42439.	45504.	48569.	51634.	54699.
Michigan	24223.	25025.	30568.	39900.	48932.	57964.	66996.	76028.	85060.	94092.	103124.	112156.	121188.	130220.
Minnesota	5978.	7053.	7212.	7979.	8746.	9513.	10280.	11047.	11814.	12581.	13348.	14115.	14882.	15649.
Mississippi	650.	1494.	2701.	3526.	4351.	5176.	6001.	6826.	7651.	8476.	9301.	10126.	10951.	11776.
Missouri	1053.	1252.	2351.	2341.	3331.	3321.	4311.	4801.	5291.	5781.	6271.	6761.	7251.	7741.
Montana	868.	728.	947.	1029.	1111.	1193.	1275.	1357.	1439.	1521.	1603.	1685.	1767.	1849.
Nebraska	2748.	3143.	3306.	4249.	4692.	5135.	5578.	6021.	6464.	6907.	7350.	7793.	8236.	8679.
Nevada	326.	302.	477.	553.	629.	705.	781.	857.	933.	1009.	1085.	1161.	1237.	1313.
New Hampshire	551.	777.	1279.	1513.	1747.	1981.	2215.	2449.	2683.	2917.	3151.	3385.	3619.	3853.
New Jersey	3178.	5624.	6386.	8444.	10502.	12560.	14618.	16676.	18734.	20792.	22850.	24908.	26966.	29024.
New Mexico	2500.	2074.	2657.	3049.	3441.	3833.	4225.	4617.	5009.	5401.	5793.	6185.	6577.	6969.
New York	10834.	9073.	12019.	12019.	12019.	12019.	12019.	12019.	12019.	12019.	12019.	12019.	12019.	12019.
North Carolina	11914.	9437.	6909.	6912.	5915.	5918.	6921.	6924.	6927.	6930.	6933.	6936.	6939.	6942.
North Dakota	1401.	1724.	2267.	2560.	2853.	3146.	3439.	3732.	4025.	4318.	4611.	4904.	5197.	5490.
Ohio	9351.	9039.	7985.	7772.	7559.	7346.	7133.	6920.	6707.	6494.	6281.	6068.	5855.	5642.
Oklahoma	50.	147.	147.	166.	225.	264.	303.	342.	381.	420.	459.	498.	537.	576.
Oregon	1562.	2141.	2427.	2655.	2883.	3111.	3339.	3567.	3795.	4023.	4251.	4479.	4707.	4935.
Pennsylvania	543.	628.	775.	891.	1007.	1123.	1239.	1355.	1471.	1587.	1703.	1819.	1935.	2051.
Rhode Island	1043.	1129.	1384.	1553.	1723.	1893.	2063.	2233.	2403.	2573.	2743.	2913.	3083.	3253.
South Carolina	1610.	1593.	1043.	1043.	1043.	1043.	1043.	1043.	1043.	1043.	1043.	1043.	1043.	1043.
South Dakota	658.	946.	1029.	1258.	1487.	1716.	1945.	2174.	2403.	2632.	2861.	3090.	3319.	3548.
Tennessee	1606.	1450.	1610.	1819.	2028.	2237.	2446.	2655.	2864.	3073.	3282.	3491.	3700.	3909.
Texas	39984.	44980.	47820.	53187.	58554.	63921.	69288.	74655.	80022.	85389.	90756.	96123.	101490.	106857.
Utah	50.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
Vermont	225.	267.	183.	213.	238.	263.	288.	313.	338.	363.	388.	413.	438.	463.
Virginia	5478.	5754.	7914.	9691.	9863.	10045.	11322.	12799.	13776.	14753.	15730.	16707.	17684.	18661.
Washington	11509.	13933.	16333.	18429.	20470.	22511.	24552.	26593.	28634.	30675.	32716.	34757.	36798.	38839.
West Virginia	1365.	1342.	2044.	2293.	2542.	2791.	3040.	3289.	3538.	3787.	4036.	4285.	4534.	4783.
Wisconsin	4707.	4636.	4914.	5347.	5780.	6213.	6646.	7079.	7512.	7945.	8378.	8811.	9244.	9677.
Wyoming	377.	436.	254.	325.	376.	467.	528.	609.	680.	751.	822.	893.	964.	1035.

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